Ca Patient's 'Unexplained' Fever Laid to Infection

Medical Tribune Report

WASHINGTON—Unsuspected and difficult to diagnose infection, often of fungal etiology, may explain "unexplained" fever in cancer patients, investigators from the Division of Infectious Diseases at Indiana University School of Medicine, Indianapolis, told the 15th Interscience Conference on Antimicrobial Agents and Chemotherapy sponsored by the American Society for Microbiology.

Important clues to the presence of infection are the type of neoplasm, the granulocyte count and clinical or laboratory abnormalities indicating specific organ involvement, they suggested.

"While many neoplasms are capable of causing fever without the presence of infection, cancer patients often have compromised immune mechanisms, either by virtue of their disease or because of therapeutic agents used in treatment, which tend to make them more susceptible to opportunistic infections," said Dr. Friedrich C. Luft, head of the research team.

Patient Acutely Ill

He and Drs. J. Peter Rissing, Arthur White, and Geo. F. Brooks, evaluated the causes of fever of unexplained origin (FUO) in 36 cancer patients seen during a 30-month period. Sixteen patients had lymphoma, 12 leukemia, and eight solid tumors.

Each patient met certain criteria: a diagnosis of malignant neoplasm documented prior to fever onset; fever of at least three weeks duration; fever higher than 38.3 degrees centigrade on several occasions; and an uncertain diagnosis after one week in hospital.

"These criteria served to exclude patients with fever due to self-limited viral infections and those with bacterial infections responsive to antibacterial therapy," Dr. Luft explained. "These patients were acutely ill. They had persistent fever in spite of antimicrobial therapy with combinations of antibiotics which included gentamicin, cephalothin and carbenicillin."

The research team anticipated that the majority of patients selected would prove to have fever secondary to neoplasms. "This did not occur," declared Dr. Luft. "Minimally, 50 per cent of our patients had infections. And it was not possible to rule out the presence of infection with absolute certainty in patients who had fevers presumably due to their neoplasms."

Fungi were the cause of infection in nine of the 18 infected patients. Histoplasmosis was found in three patients, candidiasis in three and aspergillosis, systemic sporotrichosis and cryptococcal meningitis in one patient each.

"This reflects the increasing importance of fungi as a source of infection in patients with compromised body defenses," noted Dr. Luft.

Six patients had unresolved pyogenic infections, one had tuberculous pericarditis, and two had viral infections.

In the 18 apparently noninfected patients, fever appeared associated with some change in the neoplasm, according to Dr. Luft. "Five of the six patients with solid tumors had noted new masses or swellings and lymphoma patients often had newly enlarged lymph nodes," he said.

While the infected and noninfected group of patients had a number of features in common, for example age and sex distribution and mean duration of fever, several distinguishing parameters were noted.

"Absolute granulocyte counts were strikingly different for the two groups," said Dr. Luft. "In infected patients, marked granulocytopenia was evident. Eleven patients in this group had absolute granulocyte counts of less than 1000/mm³ and five others less than 3000/mm³.

"In contrast, few of the noninfected patients had granulocytopenia. Only one patient in this group had a granulocyte count of less than 1000/mm³."

Type of neoplasm also distinguished infected from noninfected patients, according to Dr. Luft. All 12 leukemia patients had infection.

Morphologic Exams

Morphologic examination of biopsy or aspiration specimens, with cultures, was the most productive diagnostic measure, the research team concluded. "In infected patients, likely sites for productive biopsy procedures were clinically apparent. These included pulmonary infiltrates visible on chest roentgenograms or abnormalities detected on physical examination. There was a paucity of abnormalities indicating organ system involvement with infection in the other 18 patients.

"Regardless, physicians' diagnostic efforts should not be deterred in such patients," Dr. Luft continued. "Repeated thorough evaluations for infection are warranted."

Dr. Luft stressed, however, that diagnostic measures must be tailored to the individual cancer patient. Noting that a large number of aggressive procedures were done in the apparently noninfected patients, he said: "These patients were able to withstand major diagnostic efforts whereas the often moribund infected patients could not. In the latter instances, the physician and patient together must decide whether surgical diagnostic procedures and potentially toxic antimicrobial therapy will prolong useful life or make dying difficult."

Medical Tribune

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and Medical News

Vol. 14, No. 42 world news of medicine and its practice—fast, accurate, complete Wednesday, November 14, 1973

Is the Administration Taking Research Control From NIH?

By KEN SANDLER
Medical Tribune Staff

WASHINGTON—A secret meeting of two former secretaries of the Department of Health, Education, and Welfare, a former head of the National Institutes of Health, the president of the National Academy of Sciences, a former U.S. Surgeon General, the deans of three major medical schools, and prominent researchers, was convened here to discuss the implications of allegations that the Nixon Administration is taking control of the NIH's biomedical research out of the hands of the researchers and physicians and transferring it to lawyers and politicians within the Administration—and is firing government scientists who oppose the new policy.

SEN. A. RIBICOFF.

The group has asked the National Academy of Sciences to conduct an investigation of this alleged removal of research policy decisions from the scientists, and reliable sources close to Sen. Abraham Ribicoff (D.–Conn.) stated that he will hold open hearings—at which NIH officials will be called on to testify—on the Government's research policies within the next few months.

Scientists at NIH, the Food and Drug Administration's Bureau of Biologics, and other officials confirmed, in discussions with MEDICAL TRIBUNE, some of the charges that morale has been wrecked by the Nixon policies. Because of the delicacy of the situation ("criticize the Administration, and you'll be looking for a new job"), MEDICAL TRIBUNE agreed to not-for-attribution interviews.

Participants at the meeting, which was informally sponsored by Senator Ribicoff, himself a former Secretary of HEW, included Wilbur J. Cohen, another former HEW Secretary, now dean of the School of Education at the Uni-

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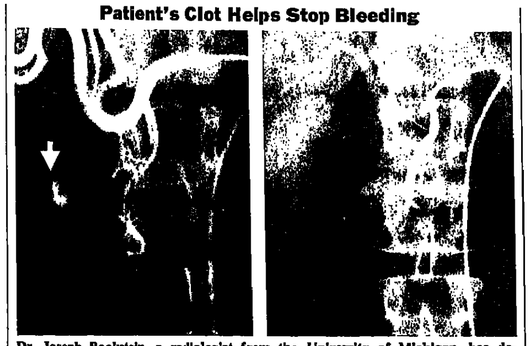
INSIDE THIS ISSUE

Patient's Clot Helps Stop Bleeding



Dr. Joseph Bookstein, a radiologist from the University of Michigan, has developed a technique for using a modified clot of the patient's own blood and placing it in a damaged artery to control internal bleeding (see story, page 13). Left, light spot (at arrow) on angiogram shows puddling from lesion in left gastric artery. Bleeding persisted despite transcatheter hemostasis with vasopressors. A 1-cc. clot was treated with thrombin and forced through the catheter. Angiogram a few minutes later (right) shows absence of lesion. Control was essentially permanent, since no rebleeding occurred.

Hormone Test Aids in Choice Of Therapy for Breast Tumor

Medical Tribune Report

SAN DIEGO, CALIF.—A 24-hour in vitro assay, which indicates that about half of all breast tumors depend on one or more hormones for their growth, is now helping clinicians decide whether a mastectomy is necessary or whether the tumor growth can be suppressed by drug therapy or by surgical techniques, Dr. John R. Hobbs, of the Tumor Biology Group, Westminster Hospital Group, London, told a seminar at the Scripps Clinic here.

In the test, a slice of tumor tissue is incubated for 24 hours in medium containing prolactin or some other hormone and compared with a similar slice incubated without the hormone in the same medium. If tumor tissue growth depends on the hormone, the effect can be detected visually or by an increase in the activity of the cancer-related enzyme, dehydrogenase, he explained.

Clinical experience indicates that five patients with tumors shown to be prolactin-dependent in the test underwent periods of regression when the pituitary was removed, Dr. Hobbs stated, explaining that the pituitary gland controls the production of prolactin. In other cases when prolactin levels returned to normal after the removal of the pituitary, the Sandoz drug CB-154 reduced prolactin and also caused a positive regression of the breast tumor. This drug ((2-bromo-α-ergocryptine) is not yet available in the United States.

Similarly, in nine of 10 patients whose breast cancers were shown in the test to depend on estrogen, positive regression was observed when their ovaries were removed or when they were treated with testosterone or antiestrogen drugs.

In five patients whose tumors were dependent on androgen, as seen in the test, adrenalectomy or treatment with an antiandrogen drug caused regression in four.

The test now indicates that there are at least five types of hormone-dependent breast tumors. They include those that depend on prolactin only, prolactin and estrogen, prolactin and testosterone, testosterone only, and estrogen only.

"Where combined dependence is pres-

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Atherosclerosis May Signify Return to Lobsterlike State

Medical Tribune Report

BETHESDA, MD.—Atherosclerosis in man may be caused by the reversion of his arterial wall to an evolutionary primitive state similar to that of the arterial wall of the lobster, says Kolomon Laki, Ph.D., of the National Institute of Arthritis, Metabolism, and Digestive Diseases.

To emphasize his theory, Dr. Laki prefers to call atherosclerosis "langoustization of the arteries" (from *langouste*, French for lobster).

Continued on page 20

Britain's NHS at 25

PART II

By NATHAN HORWITZ
Medical Tribune Staff

Britain's comprehensive health care program was in near disarray by the mid-'60s. Physician discontent was at a peak, the "brain drain" was in full swing, and even Continental advocates of national health insurance were pointing to Britain as a good example of how not to do it. How the British worked their way out of the mess is told in this second of a series of articles on the National Health Service.

LONDON—As Britain's National Health Service moves into its second quarter-century, the nation's 23,000 general practitioners are a good deal less tired than they were a few years ago.

They also are better paid, more assured of themselves, and gaining immeasurably in public esteem and professional status.

A recent national survey showed that 91 per cent of patients questioned were satisfied with the health care they were getting. The criticisms of 9 per cent were leveled largely at problems of hospital service and admissions for elective procedures.

Another sign of the times is that general practice is increasingly a specialty of choice among medical students. And still another is that Britain's medical schools now have eight chairs of general practice or family practice. Two years ago there were none.

This is a far cry from the picture in the early '60s, when British G.P.s, along with other physicians, were emigrating to Canada, Australia, and the United States.

"That was a period," recalled Dr. Donald Irvine, secretary of the Royal College of General Practitioners, "when going into general practice meant going

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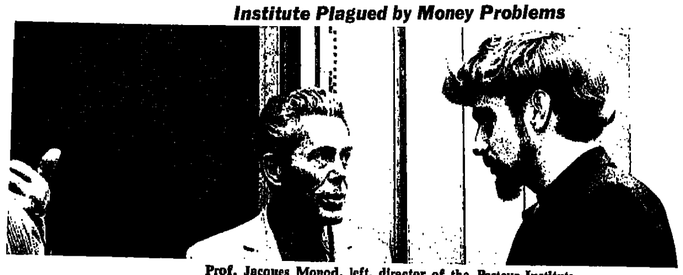
DR. DENNIS COOK

...in the Contest for Dali Prints. See Pg. 21

Institute Plagued by Money Problems



Prof. Jacques Monod, left, director of the Pasteur Institute.

Lack of Funds Forces Pasteur to Cut Staff

Medical Tribune World Service

PARIS—Threatened by dwindling funds and a straitened budget, the 85-year-old Pasteur Institute announced that it will cut its 1,120-member staff by a little over 10 per cent: between 125 and 135 people will soon be facing dismissal.

"It is a question of maintaining the institute in existence or shutting down," its director, Prof. Jacques Monod, said.

The institute was originally established as an antirabies center in November, 1888, three years after nine-year-old Joseph Meister became the first patient bitten by a rabid dog to receive the 10-day series of immunizations developed by Louis Pasteur. In the wake of the success of the immunization, 2,500 victims of rabid bites underwent therapy.

Donations to establish the institute came from people all over the world, including the czar of Russia, the sultan of Turkey, and the emperor of Brazil. Its dedication, which came two years after Pasteur had received the Reynard Prize for his work on rabies, was attended by the president of France and other notables.

Bettmann Archive Photos

At present the institute receives annual research subsidies from the French Government that amount to about 15,000,000 francs. Between 1970 and 1973, however, payroll costs alone rose from 23,000,000 to 34,000,000 francs, with an accompanying personnel increase of only 70, Professor Monod said.

He is hoping for subsidy increases that, when added to the proposed payroll saving, would give the institute an additional 10,000,000 francs a year and its continuing independence. He emphasized that foreseen staff cuts would take place only in what he called "the lesser disciplines," and reaffirmed top priorities for the institute's research in microbiology, immunology, fundamental biochemistry, and molecular biology.

Penicillin-Group Drugs Still Most Popular Antibiotics

Medical Tribune World Service

ATHENS—Drugs of the penicillin group and those related to it are still used almost as often as all other antibiotics combined, according to an analysis of prescribing practices relating to more than 15,000 hospital patients in three countries. Tetracyclines and cephalosporins stand in second and third place, and gentamicin is increasingly more popular than kanamycin. Chloramphenicol has not been used often since 1971.

Reporting these data from the Boston Collaborative Drug Surveillance Program, which groups nine hospitals in the United States, Canada, and Israel, Dr. I. Borda told the eighth International Congress of Chemotherapy here that adverse reactions were most often gastrointestinal.

Ampicillin, neomycin, and tetracycline were incriminated in about two-thirds of the GI reactions, most of which were mild or moderate.

Dr. Borda, of the University of Western Ontario, London, Ont., commented: "Nausea, vomiting, diarrhea, anorexia, and such symptoms are notoriously difficult to evaluate in sick people. They cannot be 'measured,' neither can the possibility of a placebo effect be ignored."

More than one-half of the skin reactions were attributed to the penicillin-ampicillin group. Ampicillin was held responsible 101 times; the penicillins, although more often used, only 57 times.

Kanamycin, gentamicin, neomycin, and tetracycline were related to most of the renal effects. Relatively few hematologic reactions were recorded.

Four deaths were attributed to antibiotics. Superinfection had developed in three of the four cases. In two it was a gram-negative septicemia and in the third a massive necrotizing pneumonia due to Candida albicans. Concomitant steroid treatment was given to two of these patients.

The fourth death was due to renal failure in a patient who had received protracted kanamycin and gentamicin therapy.

"Four deaths in close to 10,000 patients treated with antibiotics, a rate of one in every 2,500, is relatively low," Dr. Borda observed. "Nevertheless, it reinforces the concept that chemotherapeutic treatment be given with specific indications, restricted to necessary drugs, and special attention be paid to concomitant steroid administration."

Dr. Borda also reported that three types of serious drug-induced events—convulsions, deafness, and anaphylaxis—have recently been studied in the program.

Among 12,617 patients, drug-attributed convulsions occurred in 17 (1.3 per 1,000). Out of 1,245 patients given intravenous penicillin, four had convulsions (3.2 per 1,000). None of the patients had epilepsy or other diseases affecting the central nervous system. High dosage or renal impairment or both were present in all four patients affected, resulting in high blood penicillin levels. No convulsions occurred in 2,398 patients who received oral or intramuscular penicillins. One patient had seizures attributed to high doses of isoniazid, a drug received by 475 patients.

Among 11,526 patients, 32 suffered drug-related deafness (three per 1,000). The aminoglycoside antibiotics were the most frequently incriminated drugs, 13 in 1,000 exposed patients becoming deaf. Three patients died from their underlying disease while still deaf. Only two of the 10 patients in whom the outcome was known recovered full hearing.

Health Fails Challenge

VLAARDINGEN, THE NETHERLANDS—The Dutch Council for Health Awareness did not believe that man is as healthy as he thinks and, to prove it, examined 200 citizens who had declared themselves to be "healthy." Results: 52 referrals to specialists and 65 referrals to general practitioners.

New Radioactive Agent May Enable Nonsurgical Detection of Metastases

Medical Tribune Report

CHICAGO—Preliminary results from a study of 75 cancer patients scanned after receiving a new radioactive pharmaceutical, bleomycin tagged with indium^{111}, offer promise of a nonsurgical means for accurate staging and earlier detection of subclinical metastatic disease.

Excellent correlation with proven diagnosis was obtained in 59 patients (79 per cent accuracy) with primary or metastatic melanomas, carcinomas, sarcomas, and lymphomas, according to Dr. Melvin L. Silverstein, director of the Multidisciplinary Breast Clinic, University of California, Los Angeles.

The accuracy rate, reportedly greater than in existing scanning methods, appears to be similar in an additional 75 patients not included in the study because of insufficient follow-up.

"In cases we have studied, concentration in the tumor is five to 25 times greater than in normal skeletal muscle," Dr. Silverstein reported. "What we need is the hardware to pick up that concentration. Once we get better scanning equipment, we hope to get tumors smaller than 2 cm., tumors not now adequately scanned with existing equipment."

Labeled bleomycin, an antineoplastic antibiotic, concentrates in tumor to a much higher degree than labeled gallium, which is currently used.

The reason for localization is not known, said Dr. Silverstein, but may be related to the inflammatory reaction and the edema.

news index

CLINICAL NEWS NOTE: "*Excessive intake of preformed vitamin A has resulted in serious toxic side effects, especially in young children, and there is considerable documentation to support this statement.*" (*Dr. Arnold P. Gold; see "Current Opinion," page 6.*)

FEATURE INDEX

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Smoke of Burning Synthetic Carpet Held Lethal Hazard

Medical Tribune Report

CHICAGO—Animal experiments showing the death-dealing potential of smoke produced by flaming acrylic and nylon carpeting were reported here by a Harvard Medical School investigator, who urged that standards of biologic tolerance be established for synthetic fibers.

Tests of flammability are not adequate, Dr. Donald P. Dressler told the Clinical Congress of the American College of Surgeons.

Rats invariably die—often in less than two minutes—after inhaling smoke from ignited acrylic carpeting at a temperature otherwise compatible with survival.

Dr. Dressler pointed out that synthetic fibers, such as acrylic, are now replacing wool in carpeting in schools, commercial buildings, and homes.

Emphasizing that smoke inhalation accounts for more than 5,000 deaths each year, he said the studies he conducted jointly with Drs. Edna Butaney and Anne W. Phillips "clearly demonstrate that indiscriminate use of building and decorating materials may result in lethal hazards."

750 Rats Exposed to Smoke

In the experiments, some 750 rats were exposed in a controlled-atmosphere chamber to smoke produced by standard acrylic rugs, wool rugs, or white pine wood. Temperature and humidity as well as smoke concentrations could be controlled and monitored.

Each type of material was either ignited or allowed to smoulder in a combustion chamber. The smoke produced was cooled or heated as desired and then introduced into the animal chamber at a rate of 40 cubic feet per minute.

Smoke from smouldering material, whatever its source, caused no deaths if inhaled at room temperature, Dr. Dressler said. As could be expected, he added, the higher the temperatures, the greater the mortality, and mortality increased with length of exposure at any given temperature.

But tests made of smoke from ignited—rather than smouldering—materials revealed that the acrylic carpeting was deadly even at room temperature (25° C., 77° F.). All animals inhaling such smoke at this temperature died, and they frequently did so within two minutes. Later tests showed that nylon carpeting appears to be "even more dangerous on ignition," according to Dr. Dressler.

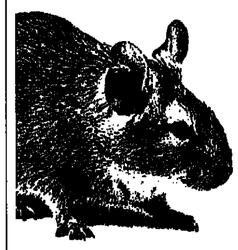
By comparison, smoke from ignited wool or ignited wool carpeting caused no deaths during the test period in the chamber at the same temperature of 25° C.

In an interview with MEDICAL TRIBUNE, Dr. Dressler commented that solid data are lacking on the part played by building and decorative materials in the smoke inhalation deaths resulting from such disasters as airplane crashes and fires in offices, houses, or nursing homes.

What the animal studies indicate, he said, is that the chances for escape and survival are good if a person is exposed only to smoke produced by smouldering, provided the temperature remains fairly cool.

"But if synthetic fibers like acrylic are ignited, you're in trouble," he continued. "The 'escape time' for a rat is one or two minutes. We don't know about the human being—it's hard to extrapolate from animal to man—but certainly the margin of safety is small once the material is ignited."

Degu Has 2 Thymuses



The degu, a ratlike rodent found in the lower altitudes of the Andes Mountains of South America, possesses an unusual biologic quirk—it has two anatomically separate thymus glands. Because of this, Dr. David Boraker, an immunologist at the University of Vermont, is developing a pedigreed colony for biologic experimentation.

NIAID Test Shows Level of Antibody To Mycoplasma

Medical Tribune Report

BETHESDA, MD.—A new test for detection of antibody to Mycoplasma pneumonine, the organism responsible for outbreaks of acute respiratory infection during late summer and early fall, has been developed by Drs. Robert M. Chanock, chief of the Laboratory of Infectious Diseases of the National Institute of Allergy and Infectious Diseases, and Helmut Brunner, according to NIAID.

The test utilizes a modified radioimmunoprecipitation procedure in which small amounts of radioactively labeled mycoplasma antigen are incubated with serum being tested for antibody. Anti-human gamma globulin or whole serum, prepared in animals, is then added to precipitate the antigen-antibody complex and, after overnight incubation, the material is centrifuged.

The amount of radioactivity in the precipitate indicates the amount of antigen bound to specific antibody and the presence or lack of antibody in the serum sample, the investigators said.

A Nonsteroid Drug Hopeful in Managing Prostate Carcinoma

Medical Tribune Report

CHICAGO—A nonsteroid drug has brought favorable response in nine of 12 patients with advanced prostatic carcinoma. Three have been in complete remission for more than 50 weeks, according to Dr. George R. Prout, Jr., and Dr. Robert J. Irwin, of Harvard Medical School and Massachusetts General Hospital.

The drug, now called Schering 13521, is well tolerated. Three patients who were sexually potent before therapy have remained so. They continue to have normal levels of plasma testosterone and normal testicular tissue activity. In six of the 12, a normal serum acid phosphatase was obtained. None had received prior hormonal therapy.

The drug did not show any clear-cut effect, however, on patients who had previously received other forms of hormone therapy without benefit.

"The drug has promise as a useful agent in the management of prostatic carcinoma," Dr. Prout said.

The investigators gave their report at the Clinical Congress of the American College of Surgeons.

New Percutaneous Technique Effective for Biliary Relief

Medical Tribune World Service

MONTREAL.—A new technique of percutaneous transhepatic biliary decompression may be the best method for patients whose pending liver failure or over-all condition makes it impossible to reconstruct the biliary tree.

Drs. Alfred E. Stockum and William Molnar, of the Department of Radiology, University Hospitals, Ohio State University, reported that they have now used the percutaneous technique in 10 patients over the past four years. In certain well-selected cases, transhepatic biliary decompression is "the only remedy to improve the desperate condition of the patient," they told the American Roentgen Ray Society here.

Obstructive jaundice, if caused by stricture of the common duct, is usually from surgical trauma, they said. "The subsequent, multiple surgical interventions, including possible primary repair and choledochal or hepatic anastomosis to intestinal tract, all may yield to occasional restenosis causing recurrent ascending cholangitis and chronic hepatitis. Uncontrollable pruritus, psychosis, and occasional portal hypertension may further aggravate the clinical condition, which eventually ends in hepatic failure and coma."

Referred for Cholangiography

Drs. Stockum and Molnar pointed out that all 10 of their patients were originally referred to them for visualization of the biliary structures by percutaneous cholangiography. Five had benign stenosis, and five had obstruction caused by malignant tumor. After they visualized the biliary system and decided on percutaneous drainage, they inserted under local anesthesia an 18-guage, thin-walled needle sheathed with a Teflon catheter through the ninth intercostal space at the midaxillary line. They then directed the needle into a free, contrast-filled tributary of the right hepatic duct, and brought a curved-tip guide wire through the needle; it was then advanced into either the left duct or an adjoining right duct tributary. The needle was then removed and, using the guide wire, the number 7 Teflon catheter was manipulated into its final position. "The catheter in this position will provide external biliary drainage which will be collected into a plastic bag attached to the catheter. Direct internal drainage is established only if the tube can be guided across the stenotic, compressed, or invaded segment into the anatomosed intestinal loop or distal common duct."

In their first patient, they recalled, "the transhepatic drainage tube was inserted with the intention only to improve the patient's condition before the contemplated surgical intervention three weeks later. In the rest of the patients the demonstrated condition of the biliary system precluded further surgical intervention."

Detailing the indication for use of the percutaneous drainage technique, they cited four benign conditions in which it could prove of value: postoperative common duct stricture; restenosed choledochoduodenal or -jejunal anastomosis; intrahepatic biliary stones, where the procedure may allow direct irrigation through the tube utilizing heparin or bile salt solutions to dissolve the stones; and sclerosing cholangitis without renal failure.

A second group of indications include intrahepatic obstruction caused by primary or metastatic tumors and recurrent extrahepatic obstruction due to primary biliary or pancreatic tumors.

Blood Substitute Said to Fulfill 5 Out of 6 Criteria

Medical Tribune Report

CHICAGO—Stroma-free hemoglobin solution, made from outdated human whole blood, has been used successfully to maintain a puppy for one hour during heart-lung bypass.

The performance of the solution was similar to that of whole blood, according to Dr. Wilfred F. Holdefer, of the Department of Surgery, University of Alabama.

"Our data suggest the possible effectiveness of stroma-free hemoglobin solution as a whole-blood substitute," he reported to the Clinical Congress of the American College of Surgeons.

He said it fulfills five of the six criteria of an ideal blood substitute: There is no generalized or allergic reactions due to antibody-antigen sensitivity. There is no interference with typing and cross-matching of blood and no adverse effect on body organs.

However, the solution cannot now be retained in the blood system for an effective period. It is excreted rapidly by the kidneys.

"The next step is a chemical problem," said Dr. Holdefer. "Since this is a chemical solution—there are no cells in it—it may be possible to hook the hemoglobin onto a molecule that would not be readily excreted."

In isolated heart perfusion, the performance of the hemoglobin solution in oxygen transport was also similar to that of whole blood.

The absence of tissue reactions as a result of species differences suggests that animal blood may be one day used where large quantities are required.

Bleeding Reported in Tests With Blood Substitute

Hektoen Institute Investigators

► A group from Hektoen Institute for Medical Research, Chicago, reported that the use of stroma-free hemoglobin was accompanied by severe bleeding in experimental animals because it apparently destroyed factor VIII and, to a lesser extent, factor V.

An anticoagulant has been identified and can be purified and synthesized, according to Alan Cochin, associate director of the surgical research department. The synthetic peptide, closely related to the natural anticoagulant, might be of value in treating abnormal clot formation.

Impure Anesthetic Causes Infections

Medical Tribune Report

BETHESDA, MD.—The use of nonsterile tap water in the preparation of topical anesthetics for an ear, nose, and throat clinic caused an outbreak of respiratory tract infections at Vanderbilt University Hospital, Nashville, Tenn., the National Institute of Allergy and Infectious Diseases (NIAID) reported.

The isolation of the contaminant organism, Pseudomonas cepacia, in bronchial washings from 22 patients, 18 of whom had been treated in the E.N.T. clinic, spurred an investigation by a team headed by Dr. William Schaffner.

ECTOPIC BEAT

"The suicide prevention centers opened in recent years in major cities across the nation have failed to make much of a dent in the suicide rate. . . ."

—release from the A.M.A.

And that's the way it goes, these days.

(Regular beat, Isomaleria Medica, page 30.)

Specialty Recertification Also Due

Mandatory Relicensure Foreseen in Decade

Medical Tribune Report

CHICAGO—Within the next 10 years physicians will be required to be relicensed to practice medicine and to be recertified to practice as specialists, the new president of the American College of Surgeons, Dr. Claude E. Welch, told that body.

"Patient care will continue to be available to the public at several levels in the future just as it is today," Dr. Welch said, "but . . . the optimum care of the present time can be improved even more by yet untested mechanisms. Recertification and relicensure furnish important methods that must be considered in detail."

Relicensure and recertification, Dr. Welch said, "certainly are not pleasing to the practicing surgeon, who visualizes another noose around his neck and further depletion of his rare hours of leisure.

"It is not a pleasant prospect for the young physician, whose admission to medical school essentially guaranteed graduation, often without marks or examinations. Nor is it complimentary to the medical profession to receive this unique criticism. But there is overwhelming evidence that this will occur. In the vernacular, it is a new ball game." He noted that it is an issue on which the American College of Physicians has taken no official stand, and that his own remarks bore no official endorsement.

But he added, "I believe it is imperative that the college immediately investigate the entire subject of recertification and relicensure; thereafter, if the college declares itself in favor of these procedures, it must plan for the tactics of its involvement."

"Multiple Pathways" Urged

As for what position the college should take, Dr. Welch said, "My recommendation would be that it approve multiple pathways to recertification, that strong support be given to outcome evaluation, and that any attempt to require examinations as a sole method for recertification be opposed."

As of now, Dr. Welch said, six state medical societies require evidence of continuing postgraduate education for continuation of membership, and 13 others have recommended voluntary participation.

The American Board of Medical Specialties last March called for the voluntary, periodic recertification of medical specialties. It is likely that "real teeth" will be inserted in these recommendations when the words "voluntary" and "certification" are replaced by "involuntary" and "licensure," Dr. Welch said.

"At the present time," he said, "recertification can be regarded as a merit badge—a nice decoration to wear but of no economic significance. In the future, if relicensure is based on recertification, it could become a matter of economic life or death."

There are several ways recertification can be accomplished, he said. The first and easiest would be a simple re-examination by computer every five to 10 years. The penalties for the 10 to 20 per cent that might be expected to fail would range from mild to severe, perhaps from a warning to required attendance at postgraduate courses to exclusion from practice until a further examination is passed.

"It is obvious that this method could be cruel to the individual and catastrophic to the community in which he practices," said Dr. Welch. "Nevertheless, this method, because of its facility, is the most likely to be chosen."

A second method of recertification would be individual participation in a variety of educational activities, including attendance at clinical congresses, meetings of other specialty societies, or participation in other academic pursuits.

A third method would be a peer review system in which a surgeon's record would be considered as the basis of recertification. "Undoubtedly deficiencies in practice would be found," said Dr. Welch. "Some surgeons have changed to become general practitioners, with insufficient surgical experience to maintain their skills. A few may be entangled in problems of ethics. In general, however, it is likely that few black sheep will be found among our members."

The third method, affirming that "nothing succeeds like success," avoids the valid criticism that a good mark on an examination does not equate with surgical ability, said Dr. Welch.

On the subject of relicensure, Dr. Welch said some measure of government control would be "almost inevitable."

"The state already has difficult decisions to make when it defines various health professionals. Let it continue to focus on this level and describe the differences, for example, between a physician, a dentist, a nurse, or a podiatrist. At the higher level, licensure of specialists should not be done unilaterally by the state," he said.

The benefits to the public of recertification and relicensure would include well-trained physicians who continually renew their knowledge, Dr. Welch said. Specialists would not be required to restrict their practice to their specialty. A specialist could continue to function as a primary physician, but a surgeon would be expected to offer the highest quality care only in his specialty.

Operations Will Remain

"Emergency surgery in isolated communities will remain, and "elective surgery, even in the hands of relatively untrained men, will persist," he said.

Dr. Welch noted that the Massachusetts Chapter of the College of Surgeons, after considering the factors that improve the performance of a surgeon, suggested that such factors should add to the basic fee for a given service. Under this system, a general practitioner would be paid the basic fee for a surgical service.

Additions to the fee would also be allowed if (1) the surgeon were board-certified, (2) he were a member of the American College of Surgeons, (3) he had at least five years experience as a practicing surgeon, and (4) he could prove continuing education in surgery.

'Bioptome' Perfected

Medical investigators at Stanford University have perfected a "bioptome" to be inserted into a patient's jugular vein and threaded into his heart to obtain a small sample of cardiac tissue. It is used to make direct diagnosis of rejection in heart transplants.

High Concentrations of Vitamin A

By ARNOLD P. GOLD, M.D.
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DR. LINUS PAULING'S STATEMENT criticizing the limitation of nonprescription sale of vitamin A tablets and capsules containing more than 10,000 International Units, which was sent to Dr. Charles E. Edwards, FDA commissioner, and made available to MEDICAL TRIBUNE, published on February 28, requires comment. The statement is replete with inaccuracies necessitating a response in view of Dr. Pauling's eminence as a professor of chemistry and twice recipient of the Nobel Prize. The views and opinions of Dr. Pauling may in part be attributed to his theoretical chemical background rather than to the practice of clinical medicine.

The American Academy of Pediatrics Committee on Drugs, in conjunction with the Committee on Nutrition, formulated a joint committee statement entitled "The Use and Abuse of Vitamin A." This commentary noted the potential grave risks relative to unrestricted sale of high concentrations of vitamin A and urged restrictions be placed on over-the-counter marketing of high-potency vitamin A preparations. This factual presentation contributed to the FDA proposal to restrict the over-the-counter sale of vitamin A to tablets and capsules containing more than 10,000 International Units.

The recommended daily allowance of vitamin A is: for infants and children up to the age of 12 years 1,500 to 4,500 I.U.; for adults 5,000 I.U.; and for pregnant women 6,000 I.U. There are no known advantages in exceeding these allowances in normal individuals, and the limitations on over-the-counter sale to products exceeding 10,000 I.U. of vitamin A seem reasonable to protect the American people, above all children, from the toxic effects of excessive vitamin A intake. Dr. Pauling certainly presents no *evidence* for his recommended optimum daily intake of 25,000 I.U. of vitamin A.

EXCESSIVE INTAKE of preformed vitamin A has resulted in serious toxic side effects, especially to young children, and there is considerable documentation to support this statement. High doses of vitamin A taken for prolonged periods of time pose a risk, particularly to the pregnant woman and fetus. In pregnant animals large doses of vitamin A can produce central nervous system anomalies resulting in hydrocephalus or encephalocele in the offspring. Infants may develop a clinical picture of hydrocephalus, while the older child and adult with hypervitaminosis A manifest signs and symptoms of unlocalized intracranial pressure, which is often referred to as the pseudotumor cerebri syndrome. Children frequently present with signs and symptoms such as headaches, nausea, vomiting, lethargy, tinnitus, diplopia, papilledema with hemorrhages, and, in long-standing cases, optic atrophy and even blindness can result. There are many other nonspecific findings encountered at all ages with excessive vitamin A intake, including dry skin and mucous membranes, sparse hair, brittle nails, myalgia, bone pain, arthralgia, abdominal pain, splenomegaly, and hypoplastic anemia with leukopenia. For these reasons the validity of the FDA regulation is apparent and is necessary to protect the American people from hypervitaminosis A.

I fail to understand Dr. Pauling's statement that the regulation would be largely ineffective and would be economically damaging to the public.

Dr. Pauling's comments relative to the vitamin A content of certain foods are pertinent as further indication for limitation of the vitamin A content in over-the-counter sales. The daily intake of supplemental vitamins is commonly employed by a significant segment of the population, while it would be uncommon and rare to find daily ingestion of half a pound of animal liver. For this reason there would be no indication to restrict the sale of such foods.

Although many people may ingest potentially toxic doses of vitamin A over long periods of time without developing hypervitaminosis A, the major factor is that some people—above all, unsuspecting children—may and have developed clinical hypervitaminosis A.

In no way does the FDA regulation restrict the prescription of high doses of vitamin A when there is a medical indication for its use, such as in nutritional deficiency states or in a state of chronic intestinal malabsorption. What the regulation does restrict is the over-the-counter sale in drugstores and supermarkets of high dosage preparations, for the easy availability and indiscriminate usage expose both children and adults to the hazards of this potential poison.

I do believe that the practicing physician should be alerted to the problem of hypervitaminosis A and that a review of the available factual data will aid him in critically reviewing such statements as that of Dr. Pauling's as well as clarifying the logic and intent of the FDA regulation.

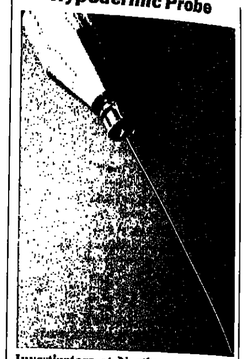
Sri Lanka Health Data

Medical Tribune World Service

COLOMBO—Government medical institutions have been supplying "unreliable and at times false" data on infectious diseases, the Sri Lanka department of epidemiology charged.

As a result, said the head of the department, Dr. Reginald Peiris, a correct assessment of the country's health situation cannot be made.

Hypodermic Probe



Investigators at Northwestern University are working to perfect "fiberoptic hypodermic probes" that may eventually eliminate the need for some forms of surgery. Based on endoscopic probes, use of the hypodermic probe depends on improved fibers and development of a small lens.

Single-Fin Goldfish Developed

Dr. Mann-Chiang Niu, Professor of Biology at Temple University in Philadelphia, and Prof. Tung Ti-chou, of the Academy of Sciences in Peking, working together on a joint study of cytology and genetics, have produced a single-tail goldfish (goldfish have a double tail fin) by injecting mRNA from matured ovarian carp eggs into freshly fertilized goldfish eggs.

Foreign Object in Esophagus May Trap the Diagnostician

Medical Tribune World Service

MONTREAL—Undiagnosed foreign objects lodged in the esophagus may produce respiratory symptoms whose cause is undetected for months and sometimes years, physicians from the University of Texas Medical Branch, Galveston, reported to the American Roentgen Ray Society meeting here.

Babies and young children who swallow small objects and come to the doctor's office with a history of poor feeding, dysphagia, and drooling are fairly common and usually present no diagnostic problems for the pediatrician, generalist, or radiologist. But when the primary complaints are respiratory rather than esophageal, the young patient may be treated symptomatically for asthma, allergies, croup, or pneumonias, without uncovering the object causing the trouble.

If correct diagnosis is not made early, "complications such as esophageal ulceration, esophageal perforation, chronic aspiration pneumonia, and failure to thrive can develop," Dr. Leonard E. Swischuk, Associate Professor of Radiology and Pediatrics, told the society. "Further complicating the problem is the fact that potentially hazardous procedures such as tracheoscopy and bronchoscopy are often performed before more simple and usually diagnostic studies, such as lateral neck roentgenograms and barium swallows are obtained."

With Drs. Pliny C. Smith and Charles J. Fagan, of the Department of Radiology, Dr. Swischuk reported on five young children with high esophageal foreign bodies who presented predominantly respiratory symptoms. In three patients, foreign bodies had been swallowed from three to five months before correct diagnosis was made; there were no esophageal symptoms in the three. Two had pneumonia as presenting symptom; three had stridor. Lateral neck x-ray alone established the correct diagnosis in two, lateral neck x-ray with barium swallow in a third, and chest x-ray in two. The children's ages ranged from nine months to four years.

Dysphagia may be minimal or nonexistent, especially if the child is young enough to be on a largely liquid diet. "It is remarkable," Dr. Swischuk noted, "how rapidly and efficiently these infants can, by voluntary selection, alter their diets to accomodate the esophageal obstruction." One nine-month-old child would drink only chocolate milk after swallowing a small plastic toy. Another very young baby with a small metallic clip in the upper esophagus and recurrent pneumonias "had so accommodated to this foreign body that if any symptoms of dysphagia were present, they were completely obscured."

Underscoring their contention that esophageal bodies may not be seen unless the physican is alert to this cause of respiratory disease is the history of one four-year-old patient. She came to the hospital four months after a key chain lodged in her esophagus with fever, chills, and a chronic, productive cough. "Review of the previous roentgenograms revealed that a foreign body was present four months earlier," Dr. Swischuk said, adding, "The esophageal foreign body, although present, was not noted then."

Death Rate Linked To Unplanned Birth In Poor Countries

Medical Tribune World Service

GENEVA, SWITZERLAND—Reducing infant and child death rates in those areas of the world that operate on an agrarian subsistence economy is an important step that leads to planned smaller families, but it is only one of several necessary steps, according to Dr. George Mettrop, consultant to the World Health Organization.

Other important contributory steps toward family planning include better education in health and nutrition and improvement in the economic status of the rural world, he said, in a study prepared for World Population Year, 1974. During the past 20 years, he reported, worldwide research has indicated that high birth rates and high maternal age are associated with high rates of disease and death for mothers and infants in all social classes.

A study of 2,287 families in the state of Uttar Pradesh in India, for example, revealed that in families with five or more births, 51 per cent of the children died, while the death rate for children in families with three or fewer births was 38 per cent.

In Egypt, another study indicated that "parents who lost an infant generally compensated by having more children."

Dr. Mettrop was replying to a question frequently asked of WHO: by lowering death rates is not WHO partly responsible for world population growth? His answer, a strong negative, was that reduction in infant mortality and over-all improvement in environmental health lead couples to serious consideration of the practice of family planning.

Barbiturate Use As Anesthetic May Cut Stroke

Medical Tribune Report

ATLANTIC CITY, N.J.—Clinical trials of barbiturates as the anesthetic or anesthetic supplement in surgery that poses a high risk of brain infarction were advocated here by investigators from the University of California School of Medicine, San Francisco, and Stanford University School of Medicine.

Their studies of dogs in which cerebral artery occlusion was experimentally produced have demonstrated that inclusion of barbiturate in the anesthetic regimen prevented strokes, the research team told the 46th Scientific Sessions of the American Heart Association.

In the laboratory trials, the right internal carotid and middle cerebral arteries were permanently clipped through a temporal burr hole in 42 dogs, divided according to anesthetic management into soven groups of six animals.

Four groups received halothane anesthesia, categorized as light, "awake" (the agent discontinued three minutes before vessel occlusion), deep, and deep with hypotension (agent increased five minutes before vessel clipping to reduce mean arterial blood pressure to 55 torr).

Of the remaining three groups, one had deep pentobarbital anesthesia, another received light halothane plus thiopental begun just before cerebral artery occlusion, and the third was given light halothane plus thiopental begun 15 minutes after occlusion.

Protective Action Clear

Findings from daily neurologic examinations as well as from brain pathology studies performed when the animals were killed on the seventh day clearly indicated the protective action of barbiturate, the investigators reported.

No neurologic abnormalities occurred in the six dogs that received deep pentobarbital anesthesia and only one of the 12 animals given thiopental before or after vessel occlusion had a neurologic deficit—a transient unilateral weakness.

By contrast, hemiparesis occurred in five of six animals in both the light and "awake" halothane groups. In the deep halothane groups, all the normotensive dogs and five of the six hypotensive animals became severely hemiplegic.

The brain studies also revealed significant differences between the barbiturate and nonbarbiturate groups in mean infarction size.

In the three barbiturate groups, means of less than 3 per cent of the right hemisphere were infarcted. Mean infarction size for the other groups was much greater: "awake" halothane, 9.6 per cent; light halothane, 10.8 per cent; deep halothane normotensive, 28.2 per cent; deep halothane hypotensive, 34.1 per cent.

"We believe that barbiturates protect principally by decreasing cerebral blood flow and intracranial pressure," the investigators said.

"The lowered intracranial pressure would minimize pressure in cerebral capillaries and venules, thus maximizing perfusion pressure in ischemic areas. . . . The low cerebral blood flow of barbiturate anesthesia would minimize cerebral edema, and might reduce capillary stasis and/or capillary damage."

Noting that increasing numbers of patients with cerebrovascular disease are subjected to corrective surgical procedures, the report pointed out that the risk of brain damage is high because of the temporary or permanent occlusion of cerebral vessels required by carotid artery thromboendarterectomy, cerebral aneurysm ligation, and cerebral artery bypass.

The investigators concluded that clinical trials of such barbiturates as thiopental are warranted for these procedures and suggested that barbiturates should perhaps be considered for treatment of acute stroke.

Members of the research team were Drs. Allan L. Smith, Julian T. Hoff, Surl L. Nielsen, and C. Philip Larson.

Compound Found That Influences Process of Aging

Medical Tribune Report

CORONA DEL MAR, CALIF.—The immediate precursor of choline, dimethylaminoethanol (DMAE), a compound synthesized in minute quantities by human beings and found in all living organisms, may retard aging process, according to Richard Hochschild, of the Microwave Instruments Company here.

Mr. Hochschild said that DMAE acts as a stabilizer on the lysosomal membrane to prevent leakage of lysosomal enzymes into the cytoplasm or extracellular spaces. Such leakage has been proposed by other investigators as a critical ingredient in the aging process.

In his experimental work, the California investigator administered the p-chlorophenoxyacetic acid ester of DMAE to 32 male Swiss Webster Albino mice at the rate of 0.3 Gm./L. of drinking water. The mice were given routine care and fed on a standard commercial pellet diet. A control group of 31 mice was treated identically except for the inclusion of DMAE.

Mean survival time for the control mice was 9.73 months after the onset of the experiment, while the survival time of the drug-treated animals was 12.39 months, or 27.3 per cent longer than the controls, he reported recently in *Experimental Gerontology*.

In addition, there were significant differences in fluorescent pigment density; mice given DMAE showed considerably less pigmentation than did the controls. And "the brains of the control animals appeared darker in color under visual examination than did those of the drug-treated mice, whose lighter color was similar to that of young animals of the same strain examined on the same occasion. The drug-treated mice were also observed to have less mesentery fat than did the control animals."

In an experiment with senile mice, Mr. Hochschild found that beginning drug treatment well past the mean expected life span of the animals resulted in a mean survival time of 56.9 days past the onset of the experiment for the controls and 85.1 days for the treated group, a 49.5 per cent increase over the controls.

"It can be concluded that life span may be influenced pharmacologically well into old age," he said, suggesting further that because of its very low toxicity in man, DMAE is a prime candidate for further study in relation to its action as a membrane stabilizer and its role in the human aging process.

Piperamic Acid Active Against Infections

Medical Tribune Report

WASHINGTON—Preliminary animal studies indicate that piperamic acid, a pyridopyrimidine derivative, is orally active against Pseudomonas aeruginosa and has low toxicity, according to Dr. Masanao Shimizu, of the Research and Development Division, Dainippon Pharmaceutical Company, Osaka, Japan.

The agent is active against bacteria resistant to piromidic and nalidixic acids, and additionally is stable with respect to metabolic inactivation, he told the 13th Interscience Conference on Antimicrobial Agents and Chemotherapy.

Piperamic acid was more effective in combating ascending kidney infections due to Escherichia coli and Klebsiella pneumoniae in mice than either piromidic acid, nalidixic acid, cephalexin, and ampicillin, Dr. Shimizu noted.

"No abnormalities were observed," Dr. Shimizu reported; after serial oral administration of the agent in mice at a dose of 4,000 mg./Kg. once daily for four weeks or in rats at a dose of 1,600 mg./Kg. once daily for two weeks.

Coinvestigators were Drs. Yoshiyuki Takase, Shinichi Nakamura, Hiromi Katae, Akira Minami, and Katsuhisa Nakata.

Hypothermia Used to Prevent Stone Heart

Medical Tribune World Service

TORONTO—Stone heart, the potentially disastrous ischemic contracture that may develop during cardiac surgery, has been prevented by prophylactic use of hypothermia, according to a team from the division of surgery of the Texas Heart Institute, St. Luke's Episcopal and Texas Children's Hospitals, Houston.

The stone heart syndrome is marked by contraction with a greatly decreased ventricular volume. "Cardiac output cannot be induced even by manual cardiac massage," said Dr. Denton A. Cooley, reporting for the surgical group at a meeting of the American College of Chest Physicians here. Dr. Cooley originally described the syndrome.

Patients with long-standing aortic valve obstruction and left ventricular hypertrophy with elevated left ventricular end-diastolic pressure and a high aortic valve gradient are those most likely to develop stone heart.

Others May Be Susceptible

"In addition to aortic valvular stenosis, patients with severe coronary artery disease associated with left ventricular hypertrophy and myocardial fibrosis likewise may be predisposed to develop this condition," Dr. Cooley said.

Using moderate general hypothermia (30° C.) and topical application of cold saline (12° C.) during anoxic cardiac arrest, 1,173 operations were performed in potentially high-risk patients with aortic valve disease and/or coronary artery occlusive disease. Because of inherent dangers, coronary perfusion was not used, Dr. Cooley said. "In this group of patients, not one instance of stone heart occurred when this technique of hypothermic cardiac arrest was followed."

However, he noted, ischemic heart contracture developed in two patients before induction of complete hypothermic cardiac arrest. In both, small doses of propranolol followed by epinephrine induced "at least temporary reversal" of the contracted state.

As an outgrowth of this experience, Dr. Cooley has now found that in a small series of patients, pretreatment with small doses of propranolol coupled with hypothermia apparently prevent stone heart and do not increase mortality from ordinary myocardial insufficiency, which may also occur during cardiac surgery. He suggested that the beta-blocking effect and the decrease in myocardial metabolic demands due to propranolol "must have played a role in its beneficial effect."

Dr. Cooley's colleagues in the study were Drs. Alexander Romagnoli, George J. Reul, Jr., Don C. Wukasch, Sami S. Kabbani, Phillip Allmendinger, Frank Sandiford, Grady L. Hallman, and John C. Norman, of the Texas Heart Institute.

Roentgenographically Occult Tumor Located by Repeated Bronchoscopy

Medical Tribune World Service

TORONTO—Roentgenographically occult tumors were found in 13 patients in 18 month by repeated bronchoscopy, Dr. David R. Sanderson, of the Department of Thoracic Diseases and Internal Medicine, Mayo Clinic, Rochester, Minn., told American College of Chest Physicians.

In each case, Dr. Sanderson said, an evaluation process had identified the site of the cancer earlier than would have been possible without bronchoscopy.

Seven patients underwent lobectomy, and six have returned to normal activity; one has chronic fatigue and dyspnea. Three patients had pneumonectomy, and two have resumed normal activities; the third is elderly and has other medical problems, but pulmonary function has been satisfactory.

One patient is alive a year after surgery, but with recurrent metastatic disease; one has apparently developed a second primary squamous cancer in the left upper lobe after resection of his left lower lobe; a third patient in whom resection could not be attempted has received radiation therapy and has sputum negative for cancer cells 11 months after treatment.

Dr. Sanderson's colleagues were R. S. Fontana, Lewis B. Woolner, Philip E. Bernatz, and W. Spencer Payne, all of the Mayo Clinic and Mayo Foundation.

Thoth

Thoth is the Egyptian counterpart of the Greek god Hermes in mythical origins of chemical alchemy. Subsidized by kings and princes, alchemists tried to convert one material into another, always with the hope of changing base metals into gold. Since those experiments were doomed, the alchemists also devoted attention to the preparation of medicines and became the forerunners of chemists and pharmacists.

The stamp was issued in 1925 to honor the first Geographical Congress in Cairo.

Text: Dr. Joseph Kler
Stamp: Minkus Publications, Inc., New York

1972 Education Cost Of a Medical Student Was $16,300-26,400

Medical Tribune Report

WASHINGTON—Educating a medical student cost between $16,300 and $26,400 in 1972, according to an Association of American Medical Colleges study.

These figures emerged from intensive study of 12 selected medical schools. The variations reflected differing educational approaches and program goals, said the A.A.M.C. Committee on the Financing of Medical Education, which prepared the report.

Approaches to Teaching Vary

The cost-per-student estimate, the report claimed, showed a narrower range than might have been expected considering the variety of approaches taken in teaching medicine in the United States.

The study was part of an over-all project to enable national decisions to be made on the financing of medical education, according to committee chairman Dr. Charles C. Sprague, also president of the University of Texas Southwestern Medical School.

For the individual medical student, the average cost came to $2,200 for tuition, $600 in lab and other fees, and at least $1,800 in living expenses.

The proportion of the annual cost per student devoted to research and clinical activities varied more widely than for instructional costs, according to the report. Instructional costs ranged from 35 to 59 per cent of the total cost, whereas research activities ranged from 16 to 45 per cent of the average cost. Clinical activities varied between 10 and 21 per cent of the average cost. Half the schools in the study were public, the other half private.

Common Preservatives Found To Inhibit Human Cell Growth

Medical Tribune Report

WASHINGTON—A group of the most commonly used preservatives in beverages and canned and frozen foods has been found to inhibit growth and cause morphologic changes in tissue cultures of human and other mammalian cells, according to T. Sreevalsan, Ph.D., and E. Ginsburg and D. Salomon, of the Department of Microbiology, Georgetown University Schools of Medicine and Dentistry, and E. Freese, Ph.D., of the Laboratory of Molecular Biology, National Institute of Neurological Diseases and Stroke, Bethesda, Md.

The group of chemicals, used primarily for their antimicrobial effect, include sodium propionate, sodium butyrate, sodium hexanoate, and octanoic and decanoic acid.

The investigators pointed out that most antimicrobial food additives are lipophilic acids that have not exhibited any gross human or animal toxicity at the concentrations usually used in food preparation and preservation.

"Since these compounds, as well as nitrite, inhibit all human cells tested in this study at least as effectively as they inhibit bacteria, the predominant consumption of food containing such compounds may potentially interfere with the function of some human cells."

They also noted that similar problems may exist with other lipophilic acid substances, such as aspirin, that are widely used. "However, our studies were done in tissue cultures," they observed, "and did not involve whole tissues or animals."

The effective concentration of lipophilic acids in tissue surrounding the gut will be reduced by several mechanisms, the team of investigators suggested. "Owing to the low pH in the stomach, the weak acids can be rapidly absorbed by ion trapping and then distributed throughout the body by blood circulation, decreasing their local concentration. Some of the absorbed compounds can be metabolized. . . . In addition, the mucous membrane may protect the underlying cells against the direct effect of insoluble free acids."

The investigators reported their findings in the *Proceedings of the National Academy of Science*.

Artificial Liver Patented

Dr. Kenneth N. Matsumura has received the first U.S. patent for an artificial liver. The "hepatic support device" contains live animal liver cells. Although it has not yet been tested on human beings, it is designed for use outside body, like an artificial kidney.

X-Ray Limits Advised

WARSAW—In a recommendation to the medical profession on limitation of the use of diagnostic x-rays, the head of the Polish Health Inspectorate said that chest x-rays should not be taken of teenagers or of children being admitted to nurseries, sanatoriums, kindergartens, schools, or summer camps. Roentgenography of pregnant women, infants, and children up to 10 years of age should be limited to those cases where it is considered absolutely necessary, he advised.

Audiometric Device

JERUSALEM—An audiometric device designed to produce highly reliable results without the insertion of an electrode into the auditory tract has been developed here by investigators at Hebrew University. It is likely to be particularly valuable, they said, in work with retarded children, who often react poorly to standard tests.

The device consists of a set of earphones, through which the subject hears sounds of graduated intensity; a set of electrodes, which are attached to the earlobe, the nose, and the vertex and which monitor the reactions of the inner ear and the base of the brain to the sounds from the earphones; and a small "averaging computer," which operates on line during the examination.

The computer isolates the reaction to the auditory stimulus from outside interference or internal disturbances.

A graph describing the reactions of the auditory nerve and the four nuclei in the base of the brain that constitute the auditory tract is then obtained on the oscilloscope screen.

The machine was developed by Harvey Sheldon Sohmer, Ph.D., Senior Lecturer in Physiology at the medical faculty, and Hillel Pratt, a neurobiology student.

"Measuring nervous reactions of the ear and brain to auditory stimuli assures a more objective hearing test," Dr. Sohmer commented. "For example, in a regular hearing test, children react to hand clapping with eyelid movements or with fright. But retarded children do not usually react at all. For this type of child, among others, the standard tests do not provide a true picture of hearing acuity."

India Surveys Nutrition

NEW DELHI—Nutritional studies conducted by the Indian Council of Medical Research show that 80,000,000 children in the one-to-six age group suffer protein and calorie deficiencies, and at least 60 per cent of all children in this country have nutritional anemia.

During the fourth Five-Year Plan, the Indian Government introduced a special program to supplement nutritional requirements of populations living in tribal areas and urban slums, and the program will be given additional funds in the fifth plan.

Under the program one meal is provided daily to children up to the age of six, as well as to expectant and nursing mothers.

Children's Aides to Tour

TOKYO—The Tokyo metropolitan government is sponsoring a tour of Europe for about 50 physicians, nurses, and others who help care for crippled children. On the 15-day trip they will inspect institutions for such children in Denmark, the Netherlands, Britain, France, and Italy.

Newborn Heart Screening

DUBLIN—Preventive measures against coronary heart disease should begin at the beginning, the Irish Heart Foundation believes. It plans to test 10,000 newborn infants for high levels of blood lipids, and those identified as at risk will be put on an appropriate diet from birth.

. . . brief summaries of editorials or guest editorials in current medical journals.

Public Ranks Scientists

A recent poll indicates that "the proportion of the public expressing 'great confidence' in the people 'running science' has fallen from 56 percent in 1966 to 37 percent in 1972." But "this decline does not support the notion that *the* public is disenchanted with science. . . .

"This falling away from science is part of a general lessening of faith in American institutions and authorities rather than a major antiscience groundswell. Questions were asked about 16 institutional areas, ranging from religion to the military, from the press to major U.S. companies. Appreciation for all of them, without exception, has fallen since 1966 to below the 50 percent mark."

Science ranked behind medicine and finance on the popularity list. It topped the U.S. Supreme Court, the Federal executive branch, and the Congress, among others.

Detailed studies of the poll showed that the age group 18 to 29 (41 per cent expressing "great confidence") had the highest opinions of scientists, while those aged 50 and over (33 per cent) gave the lowest ratings. College-educated persons gave higher ratings than high school graduates, who in turn gave higher marks than those with less education.

People in the Deep South with low incomes or living in rural parts of the country have less confidence in scientists than those economically better off and those in the more developed parts of the country. "That more 'liberal' Americans might add to this main source of discontent is suggested by the fact that those who intended to vote for McGovern were less favorable to scientists than those who intended to vote for Nixon, by a margin of 33 to 41 percent." Amitai Etzioni, Ph.D., Clyde Z. Nunn, Ph.D., editorial. (*Science 181:1123, September 21, 1973.*)

Organ Donation

The "tacitly accepted policy at all transplant centers is not to accept any living unrelated kidney donors." Physicians on transplant teams often regard such donors "with unmitigated suspicion. There is little interest in the topic, and the issue is usually quickly disposed of by quoting some anecdotal experiences with 'crackpots' and other obviously emotionally disturbed individuals. No doubt there are many such persons, but there are also many sane people who, for reasons of their own that are not crazy reasons, want to donate part of themselves to a stranger in need." One carefully executed study of potential living unrelated kidney donors showed that "eighty percent were stable, self-supporting middle-class citizens, the average age was 33, and most were married and had children. All reported that they had considered the problem for some weeks after their first call to the hospital, had discussed it with family and friends, and were sincere in their offers. None of them had known the recipients or anything about them. . . .

"The differential response of the medical profession toward genetically related donors compared with genetically unrelated living kidney donors remains puzzling. It seems to me, however, that we might be witnessing the clash of two moralities. One is the popular moral demand to help the sick and to pity the unfortunate, the other, the moral imperative to continually keep striving for one's own personal growth and development. . . .

"This is not just idle speculation—organ transplantation will one day become more comparable to, say, blood transfusion, and then the problem of donation from an unrelated living person will have to be faced." Carl H. Fellner, M.D., perspective. (*Ann. Intern. Med. 79:589, October, 1973.*)

Combination With Carbidopa Aids Levodopa Treatment

Medical Tribune World Service

BARCELONA, SPAIN—The therapy of Parkinson's disease is considerably improved by combining levodopa with carbidopa, an enzyme inhibitor, according to reports from five countries to the International Congress of Neurology here. The two compounds are administered in a single tablet formulation.

Investigators from Canada, England, France, Italy, and Spain presented the reports.

Dr. C. Warren Olanow, of McGill University, said that he and Dr. Arthur M. Schwartz carried out a blind observer study of 26 outpatients, half on levodopa in combination with carbidopa and half on levodopa with an inert placebo.

Eleven of the 13 patients receiving the combination exhibited improvement; only three in the placebo group did. Improvement meant less bradykinesia and better scores on speech, gait, posture, and disability.

The combination also reduced gastrointestinal side effects.

Dr. C. D. Marsden, of King's College Hospital and the Institute of Psychiatry, London, reported on two studies, with a total of 70 patients, conducted with Drs. J. D. Parkes and J. E. Rees.

He noted that severe side effects associated with levodopa were reduced some 30 per cent by the addition of carbidopa to the regimen.

The combination, he said, reduced the incidence of nausea and vomiting to less than 20 per cent, against 50 per cent when levodopa is given alone. This permitted rapid build-up of levodopa dosage to optimum therapeutic levels within a few weeks, compared with the months often required when levodopa is used alone.

Dr. Marsden also noted that combined therapy decreases the risk of cardiac arrhythmias and may be able to reduce the severity of postural hypotension.

Drs. P. Rondet and L. J. R. Dumas, of the University of Paris, reported that more than 70 per cent of patients treated with the new medication achieved "good results"—that is, they were able to resume professional activity or an active social life.

Teeth to Be Implanted

Investigators at the University of Florida will be removing the front teeth of 24 baboons and replacing them with synthetic teeth in an experiment aimed at cutting dental costs for human beings. The synthetic teeth will be made from material that incorporates into the bone by natural growth.

Another Growth Hormone Isolated From Human Blood

Medical Tribune Report

CHAPEL HILL, N.C.—A new growth-promoting hormone has been isolated from human blood, investigators at the University of North Carolina School of Medicine reported, calling it a major development in the understanding of human growth.

The new hormone, called "somatomedin," is secreted by the liver. According to Dr. Judson J. Van Wyk, a pediatric endocrinologist, the so-called human growth hormone (HGH) produced by the pituitary gland is misnamed because it has no direct effect on skeletal growth, but rather its major function is to trigger the release of somatomedin from the liver.

It is somatomedin, Dr. Van Wyk explained, that stimulates skeletal growth and growth throughout the body. Somatomedin, much like insulin, stimulates glucose metabolism in fat tissue and the manufacture of muscle protein. Dr. Van Wyk also said somatomedin is required for the growth of tumor cells in tissue culture.

The hormone cannot be detected in the blood of certain dwarfed children but is found at high levels in patients who have growth hormone-producing tumors. Somatomedin might have use as a stimulator of growth in some dwarfs, Dr. Van Wyk said, but the possibilities go far beyond this application.

"We may be onto something here which could open doors in medicine we never before dreamed of," he said, explaining that cancer investigators have expressed sharp interest in somatomedin.

Two tons of outdated human blood was used to extract the 243 micrograms of somatomedin that now exist, far from enough for clinical tests and not enough to determine the structure of the hormone in order to synthesize it. Only one part of somatomedin is found in 10,000,000 parts of blood.

To be called a somatomedin, Dr. Van Wyk summarized, a substance must be under the control of growth hormone to some extent, it must be insulinlike in its actions, and it must stimulate cell growth in one or more tissues.

Learning to Cope

Stanford University Hospital has set up a fully furnished house on its grounds to serve as a temporary residence for patients and their families to help them learn to cope with a long-term handicap or disability.

Internal Bleeding May Be Arrested By Modified Clot

Medical Tribune Report

ANN ARBOR, MICH—Some cases of internal bleeding can best be arrested by plugging the vessel with a modified clot made from the patient's own blood, according to Dr. Joseph J. Bookstein, Professor of Radiology, University of Michigan.

Such modified clots stop bleeding from a damaged artery without the complications caused by other types of clots or by the arterial infusion of vasoconstrictors, he said.

The variation of transcatheter hemostasis he has developed consists of forming a clot, usually by applying some of the patient's blood to a small matrix of cellulose, and then forcing it through a catheter into the artery at a point above the lesion; from there it is moved by blood flow to plug the artery.

Thrombin is usually added to the blood clot, Dr. Bookstein said; ε-aminocaproic acid is sometimes added to delay lysis, and platelets are also added sometimes.

Unmodified blood clots have been used by other investigators, as have fat, muscle, and metallic shot, Dr. Bookstein noted.

"The problem with unmodified clots," he observed, "is that they often break up too fast both in the catheter and in the arteries.

"The cellulose matrix takes care of that problem, making the clot tough enough to survive being squeezed through the catheter and to resist the natural dissolving action of the blood."

Metallic shot, muscle, and fat clots present a problem, he said, because they do not conform to the shape of the catheter or the arterial lumen.

His technique also avoids problems inherent in the procedure of infusing vasoconstrictors through a catheter to the lesion in order to stop bleeding.

"There is danger of infection at the incision and problems with starving the organs because of the decreased blood flow. Some 20 per cent of internal bleeding cases don't respond to vasoconstrictors anyway."

Even in responsive cases there is a tendency for recurrent bleeding.

But, with the modified clots he uses, Dr. Bookstein said, "the procedure is rapid, the bleeding stops immediately, and the catheter can be removed at once."

Ultimate Feasibility Of Lung Transplants Shown in Animal Tests

Medical Tribune Report

CHICAGO—The ultimate feasibility of transplanting lungs is supported by a report that lungs removed from an animal and then replaced had virtually normal structure and function.

A team of investigators from Montefiore Hospital–Albert Einstein College of Medicine and Harlem Hospital–Columbia University College of Physicians and Surgeons reported here to the American College of Surgeons that four dogs so operated on survived two to five years. The dogs all appeared to have a normal respiratory status and a normal exercise tolerance.

"The importance of this work is that it documents the fact that lung transplantation in itself is compatible with protracted good function of the transplant," said Dr. Frank J. Veith, chief of vascular surgery at Montefiore. "It means that the process of removing a lung and cutting the nerve supply and lymphatics to that lung do not necessarily produce injury or poor function in that lung. The work supports the ultimate feasibility of successful clinical lung transplantation if the problems associated with rejection and immunosuppression can be predictably and dependably solved."

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Expropriation—A New Epidemic

EXPROPRIATION—without fair, prompt, and adequate compensation—is alien to the American ideal of the rights of the individual and due process; it is, under these terms, foreign to earlier English jurisprudence and, when carried out in this manner without reference to a bona fide overriding national interest, it is incompatible with international law.

Recent expressions of national sovereignty have led to an epidemic of expropriations. It appears to be highly contagious. The reactions to expropriations are, of course, predictable—they depend on whose ox is gored.

When Arab states expropriate the holdings of American companies, there is a great vocal protest. But if the English Government, in effect, expropriates American and Swiss medicinal patents through such devices as compulsory licensing and pricing, fixing of profits and research investments, the action is greeted by thunderous silence. In the United States there is similar talk of "expropriation" through circumvention of medicinal patents either by reduction of periods of patent protection, by compulsory licensing, compulsory generics, and/or admission of substitute drugs. Some of the proposed changes could add up not to simple creeping socialism but galloping expropriation. It is particularly ironic that this attack on patent protection coincides with the first Soviet participation in the parallel protection afforded in the arts by international recognition of copyright law.

MEDICAL TRIBUNE favors the lowest possible cost of drugs consistent with drug quality and continuing drug innovation. If the patent system has not served to achieve this, then the patent system should be junked, not selectively but across the board. The fundamental premise for the patent system is the same for drugs or for devices; it is the same for copyright protection. The very least that one would expect is that intensive, probing, scholarly studies be undertaken to determine whether the patent system is obsolete before selectively dismantling it.

It would be wise for the United States and the British governments to recognize the contagious character of expropriation. The expropriation of British patents in the United States and American and Swiss patents in Britain can set the precedent for "mutual" expropriation of patents by European and Asiatic countries and the ultimate expropriation of the patents of both by African and Latin-American states.

After all, what's good for the goose is good for the gander.

Unhappily, what may be good for the happy hunting of thoughtless "do-gooders" may be dangerous for, if not fatal to, those they say they serve.

The populations of nonindustrialized states are even more dependent than those of industrialized nations on the continuing flow of new medicinals and on the assurance of adequacy of other essentials, such as nutrients, with particular emphasis on certain vitamins and amino acids. When one expropriates an oil field, the oil is still there and continues to flow. If the epidemic grows, the expropriation of the sources of new medicinals and the loss of new and needed therapeutic agents may ultimately carry a very costly price—the lives and health of the well and the sick of all nations.

Polywater

ONE OF THE BYWAYS into which physicochemical science recently wandered was that of polywater. Four and a half years ago, B. V. Derjaguin, a Soviet scientist, reported that, under certain circumstances, when water vapor condensed on a glass or quartz surface, anomalous water—polywater—formed. This remarkable water did not freeze but went into a glassy state at −30°F. and felt and looked like petroleum jelly. The announcement precipitated a storm of excitement—and controversy. Hundreds of scientists attempted to duplicate Derjaguin's discovery. It has now been conceded by Derjaguin and proved conclusively by others that polywater does not exist but entails an interaction with a few silicon atoms and organic compounds.

Ah, for the simplicity of research in inanimate matter as compared with the complexities of biochemical research—except that inanimate matter, evidently, is equally recalcitrant and troublesome.

Urinary Obstruction in Children

CLINICAL QUOTE: *"In [urethral valve] patients with obstructive symptoms, particularly, careful attention should be paid to the anterior urethra on endoscopy and at voiding cystourethrography. Early diagnosis should minimize the morbidity associated with unnecessary or inappropriate surgical procedures and considerably reduce the incidence of urinary tract infection. The specific treatment of the anterior urethral valve is transurethral resection and/or fulguration.* (Drs. Casimir F. Firlit and Lowell R. King, Department of Urology, Northwestern University, to the American Academy of Pediatrics; see page 21.)

"Ach du himmel, Dr. Freud! You want me to give you 200 marks an hour to tell you about my sex life?"

Editorial Riposte

I have written this letter in response to Dr. Sackler's editorial entitled "An Endangered Species—Homo Sapiens," which appeared in MEDICAL TRIBUNE on August 8.

Let me begin by stating my enthusiastic agreement with the main thrust of the article. However, I feel compelled to point out what I consider to be significant misconceptions about the Z.P.G. [Zero Population Growth] movement.

First of all, I am sure Dr. Sackler is aware of the almost universal agreement about what he called "demographic nonsense" among demographers, students of population studies, population and environment organizations, the Census Bureau, world governments, and the United Nations. The demographic evidence is clear-cut: the world population will double in less than 30 years at the present growth rate.

How many people are living in this world around the year 2000 is not the issue. The question to be posed is: How are we going to provide the food, water, energy, health services, and other needs for this rapidly growing population? Dr. Sackler so correctly pointed out our inability and unwillingness to provide equitably for all the world's people already. The inequities and shortages can only become more severe as the population rises.

Dr. Sackler seems to be committed to the goal of a decent and healthy life for all mankind. Those people in the Z.P.G. movement share this goal strongly. But what happens if the population continues to grow as it is presently? War, famine, and disease will maintain the population at some future level if we do not voluntarily stabilize it first. Is that the kind of life Dr. Sackler envisions for us?

I would never disagree with Dr. Sackler about the need to change our priorities to improve the lives of the less fortunate and to reduce our material greed. But I maintain that we must stabilize the population in order to accomplish those goals.

RONALD ARENSON, M.D.
Harvard Medical School
Boston, Mass.

Worried to Death

I am referring to your article headed "Psychodynamics in Heart Patients Being Identified" in MEDICAL TRIBUNE of September 19.

A patient of mine died in his sleep on March 5, 1970, at the age of 69. I had observed and treated him since 1926. He was extremely obsessive-compulsive and perfectionistic, also distrustful and often more or less slightly depressed. In May, 1968, in connection with a minor business difficulty, he suffered a mild heart attack from which he recovered quickly and uneventfully.

His unfavorable personality trends had gradually worsened since at least 1940. To his great disappointment, a truckload of merchandise which he expected did not arrive, and he was unable to trace it. Although in all probability the delay was due to adverse weather conditions, his wife was unable to convince him of this likelihood. He went to bed extremely upset and never woke up again. He literally worried himself to death.

Comment:

This is a case in which a marked long-lasting personality disturbance was an important contributing factor to the initial heart attack, as well as to the cardiac death.

Psychological and clinical testing (BP, heart rate under average conditions and under stress) may discover coronary-prone people, and psychotherapy, at least in some of these cases, may forestall cardiac accidents.

MAX L. WEIKER, M.D.
Denver, Colo.

A Nosy Doubt

It was with interest that I viewed your illustration on the front of MEDICAL TRIBUNE, September 26, in which the patient was having open heart surgery under acupuncture anesthesia.

However, one certainly wonders how much actual nourishment this patient obtained from the teaspoon of nutritious material, in view of the fact that the patient has a nasogastric tube in place, appropriately taped to his nose. I would doubt seriously that this material has a chance to pass through the normal process of digestion.

DONALD J. SCHROEDER, M.D.
Eugene, Ore.

Correction

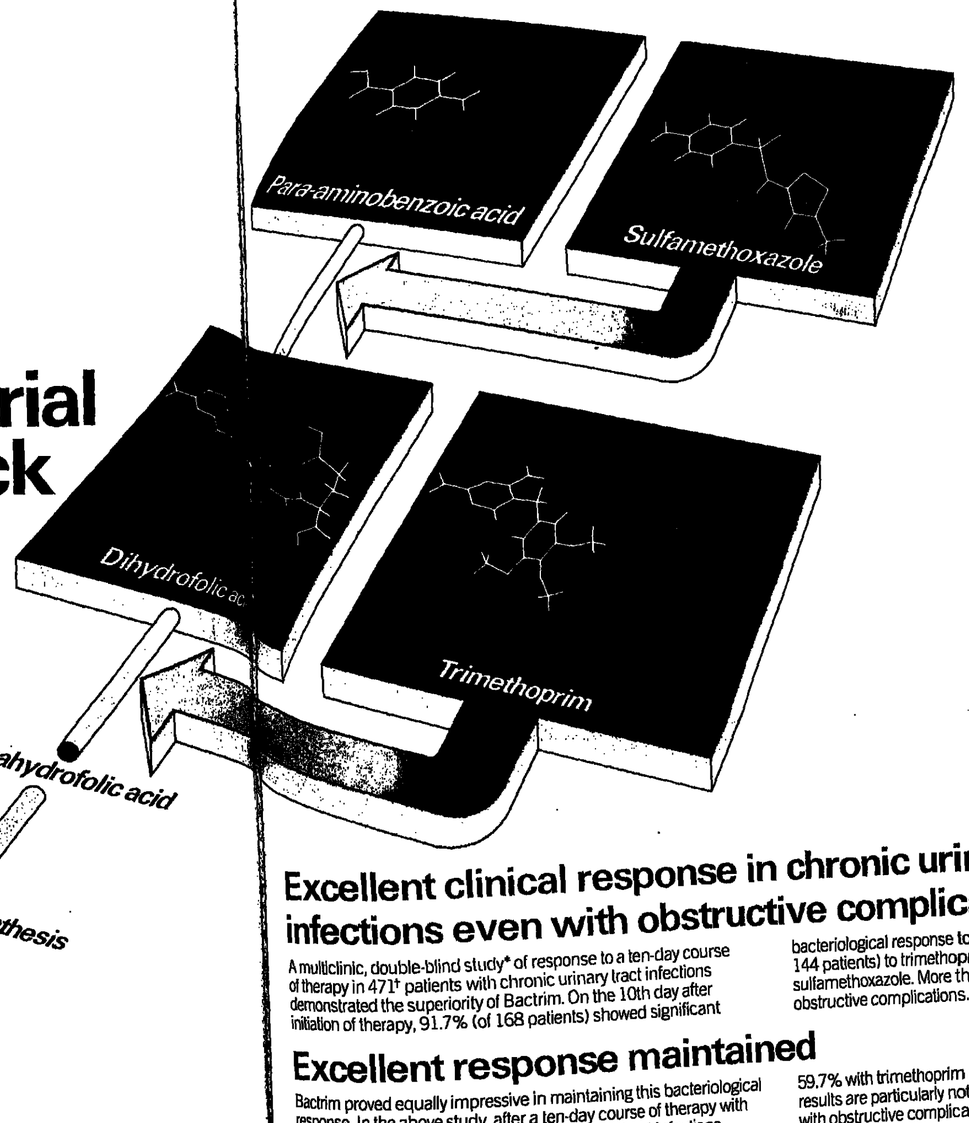
In the MEDICAL TRIBUNE *report, September 26, "Medical Schools Barely Getting By On Nixon Money," Dr. Harold Magnuson is identified as assistant dean, University of Michigan (School of Medicine implied). Not so. Dr. Magnuson is associate dean, University of Michigan School of Public Health. His statements (page 5) referred only to that.*

ROCHE announces new BACTRIM™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

a new type of antibacterial for a two-pronged attack against chronic urinary tract infections due to susceptible organisms

Bactrim is highly effective in the treatment of these infections – primarily pyelonephritis, pyelitis and cystitis – when due to susceptible organisms. This efficacy is related to the unique mode of action against bacteria (see illustration), an action that, in effect, makes Bactrim a new type of antibacterial.



Bactrim interrupts the life cycle of susceptible bacteria

Unique mode of action interrupts the life cycle at two important points, thereby impeding the production of nucleic acids and proteins essential to these bacteria. These consecutive interruptions occur because sulfamethoxazole and trimethoprim resemble naturally existing substrates. By competitive replacement of these substrates, they inhibit further synthesis.

Prescribing considerations

Clinical Limitations: Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of all antibacterial agents, especially in the treatment of chronic and recurrent urinary tract infections. Not recommended for children under twelve.
Contraindications: Hypersensitivity to trimethoprim or sulfonamides. Pregnancy and during the nursing period.
Warnings and Precautions: Both sulfamethoxazole and trimethoprim have been reported to interfere with hematopoiesis. Complete blood counts should be done frequently. If a significant reduction in the count of any formed blood element is noted, Bactrim should be discontinued. Bactrim should be given with caution to patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. Maintain adequate fluid intake. Urinalyses with careful microscopic examination and renal function tests should be performed during therapy, particularly for those patients with impaired renal function.
Adverse Effects: Among the most common side effects are nausea, vomiting, rash, leukopenia and elevations in SGOT and creatinine.

ROCHE

Excellent clinical response in chronic urinary tract infections even with obstructive complications

A multiclinic, double-blind study* of response to a ten-day course of therapy in 471† patients with chronic urinary tract infections demonstrated the superiority of Bactrim. On the 10th day after initiation of therapy, 91.7% (of 168 patients) showed significant bacteriological response to Bactrim, compared with 81.2% (of 144 patients) to trimethoprim and 64.5% (of 155 patients) to sulfamethoxazole. More than half of these patients had obstructive complications.

Excellent response maintained

Bactrim proved equally impressive in maintaining this bacteriological response. In the above study, after a ten-day course of therapy with Bactrim, 68.4% of patients with chronic urinary tract infections *maintained* response for up to 42 consecutive days, compared with 59.7% with trimethoprim and 44.4% with sulfamethoxazole. These results are particularly noteworthy considering the number of patients with obstructive complications – cases regarded as being notoriously difficult to treat.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110
† 4 patients not available for evaluation at day 10.

new BACTRIM™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

for chronic urinary tract infections

Before prescribing, please see complete product information on following page.

One Man . . . and Medicine

ARTHUR M. SACKLER, M.D.,
International Publisher, Medical Tribune

An Open Letter To Bernard Malamud
On 'Rembrandt's Hat'* and 'The Talking Horse'

Dear Bernie:

How the memories flood in. P.S. 181 and Rose Goldstein, Erasmus Hall and Gravesend Avenue, the little delicatessen and the "big" dreams.

What do I think of *Rembrandt's Hat*? Well, how should I put it? I didn't know which was more moving, the stories or the dedication:

To Ebba, Herb, Hans, George; and to the memory of Gene

That's as great praise as I can give. Of course, only you and Ebba, Herb, Hans, George, and maybe two or three others in the world would understand.

This isn't a book review. Hell, I couldn't write one to save my life. I write of *Rembrandt's Hat* and its eight short stories as a "life review." For me, each of the eight stories wove strand after strand into a pattern of life—from "The Silver Crown" to "The Talking Horse"; each added to it color as well as design.

"The Silver Crown" encapsulated so much of what has happened—so much that you didn't know about. It was not just Gans, the father, dying in the hospital of cancer, and Albert Gans, the biology teacher, ambivalently abandoning his intellectual convictions to fulfill his emotional needs. It is everybody's struggle between perceived reality and the unconscious drives of mystic faith or wishful hope when reality becomes painful.

For me, so much of science has been so much of faith. But what does one do when science fails? Most fall back on "faith." We reject the inevitability of death. Who among us can accept the mortality of a loved one? But reality always, as it always must, ends illusion. You probably didn't know Sophie smoked. When the thoracic surgeon saw her chest plate, he said, "Look, fellows, you're all doctors; I'll give it to you straight. I know you don't smoke; otherwise I'd say mom has a bronchogenic ca." Forty-eight hours later he did a pneumonectomy. Ca. But who gives up? We checked all the top experts. Nothing. The world literature. Nothing. Again and again—nothing. We hear of a rabbi who's a brilliant biochemist who believes he has a new anticarcinogen—an antibiotic. He asks no silver for the Silver Crown. An honest guy, compassionate, warm. We inject the new antibiotic—crude and, later, more refined batches. We try everything. We "fight" until she says, "Does it have to be so hard to die?" For us there was good faith and wishful hope, for too many bad faith—but regardless of faith or hope or not, all our loved ones, as we, too, will "shut our eyes."

* *Rembrandt's Hat* by Bernard Malamud
Farrar, Straus and Giroux
19 Union Square West
New York, N.Y., 10003.

Are We Followed?

In "Man in the Drawer," your American tourist, the writer Howard Harvitz, got to Kiev, Leningrad, and Moscow. On our trip to the U.S.S.R. we made Leningrad and Moscow but not Kiev. We had the same feeling, always the feeling, are we followed? We met brilliant doctors and scientists, statisticians, and humanists. Most of those we met spoke excellent English, colloquial American, not like your writer Levitansky. Harvitz, the American author, really had it rough. His wrestling with himself was tougher than with his Russian fellow writer Levitansky. Harvitz was a battleground on which fear and principle struggled in the battle between Harvitz' safety and the rights and the desperate plight of his half-Jew fellow writer and fellow man.

Truth can be as strange as fiction. In Leningrad, while we were being escorted through the Hermitage, we noted that a strange, well-dressed young man had "attached" himself to one of our daughters. He claimed to be a Rumanian student on vacation and was carrying superb, complex cinematic equipment. When we got back to the Astoria (where your Harvitz stayed), the girls told us that the young man had given them a letter to post when we left the country, a letter to "a friend in New York." It was quickly "shredded" and down the toilet bowl. Harvitz had a conflict. We had none; we were on an official mission, and our young ones had to learn the rules. They had almost placed our mission in jeopardy. Later, on several occasions, we were to ask each other—is this guy or that guy NKVD or CIA?

Fate plays funny tricks. You were always going to be a writer, I a doctor. Writing was breath to you; psychiatric research was medicine for me. I watch your climb toward the peak of your Olympus. I go from psychiatry into biology, and you as a writer practice psychintry.

"The Letter" Rocked Me

Your next story, "The Letter," really rocked me, Bernie. Was your Teddy one of my old patients? If my contact with reality were less secure, I'd say we were together when I worked at Creedmoor State Hospital. Eight pages of sheer, clinical facts; the reality of those who suffer "delusions"—or are they really delusions? And in "My Son the Murderer," again the gap between the different realities—in that case of the generations and the social dissociation so common to postadolescence.

In "Retirement" you immerse us into the geriatric disease of lonesomeness—the rejection of age, the clinging to youth, and, once again, the illusion, the hope, the faith which is "respectfully yours, Simon Morris, M.D."

Then, in "Rembrandt's Hat," as Rubin, the artist, struggles with Arkin, the "hypertensive, impulsive" art historian, we witness a wordless battle, a classic of one aspect of modern psychology and psychotherapy—nonverbal communication. But whether it was Rembrandt's or someone else's hat, will man always have to wear the crown of failure and hope?

What should I say of "Notes From a Lady at a Dinner Party"? If life plays tricks on the old ones and youth tantalizes others and herself, one has to adapt from what one learns from practice to life—let's have patience with our patients. I say "our patients." The clinical acuity, the insights into the conflicts of the emotional games people play, and the visual veracity of your characters' physical status all make for classic case histories. These stories are musts for medical students, who must learn to observe the telltale signs and symptoms so critical to diagnosis and medical prognosis.

What story did I like best?

"Talking Horse," of course. How could one born and bred in Brooklyn fail to identify with a talking horse with such a genuine Brooklyn "accent"? Nay: How can one fail to love your Abramowitz, the talking horse, more than human in his feelings and frustrations? Is he Abramowitz, a horse, or a horse including Abramowitz?! Locked in an indissoluble partnership with his deaf-mute owner and master, Abramowitz, the talking horse, can only have his "*theories, glimmers, guesses, but can't prove a thing.*" How many of us can? His master, Goldberg, doesn't seem interested in women "*but sees to it that Abramowitz gets his chance at a mare in heat, if available. Abramowitz engages to satisfy his physical nature, a fact is a fact, otherwise it's no big deal; the mare has no interest in a talking courtship. Furthermore, Goldberg applauds when Abramowitz mounts her, which is humiliating.*"

True, Bernie, in our "circus" many seek escape in alcohol or in silence; like Abramowitz' master, they are rendered deaf and mute and unfeeling by life. A few are like the talking horse Abramowitz, and try to articulate their yearning for freedom in action. Most, unlike the talking horse, are passive "casseroles" incubating a goulash of dreams, hopes, and frustrations—casseroles in "human" shapes. Since, unlike the talking horse, most are unwilling to act, most are not fated for freedom. But perhaps you're right, Bernie—what can one expect? In youth, and less often later, those who were talking horses try and try again. But who listens?

Gene would have enjoyed every page. I know Ebba and the others did, and I loved it.

Arthur

Blood for Trapped Egyptian Troops

Wide World Photo

An International Red Cross Official (left) accepted blood plasma from Israeli Army officers for a special airlift to the Egyptian III Corps trapped on the eastern bank of the Suez Canal before Egypt was allowed to send in food and medicine under United Nations supervision.

The halls of fame are open wide
And they are always full;
Some go in by the door called "push,"
And some by the door called "pull."
Anon.

Salk Team Prepares to Test Monthly Antifertility Drug

Medical Tribune Report

SAN DIEGO, CALIF.—Scientists from the Salk Institute and the University of California here are preparing for clinical trials of a once-a-month antifertility drug.

The trials, scheduled for "sometime within the next five months," will test agents that block the production of specific reproduction hormones, said Dr. Roger Guillemin of the institute. Clinical tests will be conducted by Dr. Samuel Yen, of U.C.S.D. Medical School's Department of Obstetrics and Gynecology, under contract to Salk.

In animal studies, the antifertility agents antagonize the normal action of luteinizing hormone-releasing factors (LRF), which triggers the release of luteinizing hormone (LH) by the pituitary gland.

The testing program will be conducted under contract for the Agency for International Development.

The Salk investigators believe that it should be possible to administer the LRF antagonists effectively within the first 10 days of the menstrual cycle.

Dr. Guillemin and his group first determined that man-made analogues of LRF would inhibit secretion of LH in cultures of rat pituitary cells about 18 months ago. Since then, they have observed the same phenomenom in laboratory rats.

The materials of interest are peptides, consisting of a chain of nine amino acids, in a structure of LRF that was first proposed by a group of investigators at the VA Hospital in New Orleans.

"LRF antagonists prepared so far at Salk Institute are probably not yet potent enough to be considered the ultimate choice," said Dr. Guillemin. "However, the antagonists we are making now are more potent than those we made six months ago, and the antagonists we made six months ago were more potent than those we made a year ago."

On the basis of extensive physical and biochemical studies, it is now well recognized that peptides such as LRF are very specific in their action, especially when compared with the "ubiquitously acting" steroids now used as contraceptives, Dr. Guillemin said, noting that their "ubiquitous nature" is the source of their frequently observed side effects.

Speaking of their possible use as antifertility agents in men, Dr. Guillemin said:

"The same type of molecule would also affect testicular function, but this aspect of their possible use is much less firmly established on experimental grounds. In fact, physiologic studies of the male reproductive system are much less well understood than those of the female."

While the antagonists look promising as antifertility agents, the group at Salk is equally interested in developing compounds that would trigger ovulation "in what would be, in the framework of fertility control, an improved rhythm method."

In addition to Dr. Guillemin, members of the Salk Institute group include Max Amoss, Richard Blackwell, Roger Burgus, Geoffrey Grant, Michael Monahan, Jean Rivier, and Wylie Vale.

Atherosclerosis May Be Evolutionary Lapse

Continued from page 1

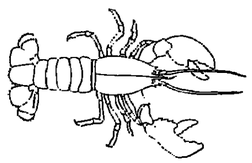
"I view the sclerotic process as a result of a mutation of some tissue elements of the arterial wall whereby it reverts to a more ancient form and produces increased amounts of transglutaminase."

Dr. Laki explains that in studies of the action of the enzyme thrombin on fibrinogen he has discovered that the resulting clot is not the type of clot formed in normal blood; the thrombin-formed clot is soluble in concentrated urea solution, while the normal blood clot is not.

"We now know that, in addition to thrombin, there is a second enzyme involved in the formation of the normal clot.

"In the clot formed by thrombin, the fibrin molecules are connected by weak hydrogen bonds. Gently warming is enough to disperse the clot. In the normal clot the second enzyme is also acting, and the fibrin molecules become connected by firm chemical bonds. Such a clot can be dissolved only by digesting it with a powerful proteolytic enzyme like plasmin."

Dr. Laki concludes that the enzyme that produces the clot needed for hemostasis and wound healing is this second enzyme, which is a transglutaminase. The clot formed by thrombin is seen as a preliminary step.



Transglutaminase occurs in the blood of men and other vertebrates as a precursor, Dr. Laki says.

Has No Thrombin System

Getting back to the lobster, he explains that this animal has no thrombin system. In the lobster, fibrinogen is clotted directly by a powerful transglutaminase released from tissues.

Human fibrinogen also can be clotted directly by high concentrations of transglutaminase.

"In other words, increased amounts of this enzyme can be as dangerous as its absence," he says, adding that transglutaminase "can clot fibrinogen directly even if the thrombin system is switched off with coumarin or inhibited with heparin."

If such direct clotting occurs, "the patient may die from thrombus formation (fibrinogen clot) in spite of the presence of coumarin or heparin medication.

"I believe most physicians do not realize the possibility of this danger."

Dr. Laki put rabbits on a high cholesterol diet for several weeks and then, after sacrifice, studied portions of aortas that were heavily affected with sclerotic plaques. These portions contained an average of three times as much transglutaminase as healthy specimens of aorta.

The actual plaques comprised no more than 10 per cent of the diseased portion of the tissue, which means that some tissue elements of the arterial wall had high levels of transglutaminase.

Dr. Laki says he believes that it is in the smooth-muscle layer of the arterial wall that a mutation of some tissue elements causes the arterial wall to revert to a more ancient form—that of the lobster—and produce increased amounts of transglutaminase, with resulting atherosclerosis.

"The reason for my belief is that a tissue element otherwise low in transglutaminase content is the most likely one to have mutated to be a rich source of transglutaminase, and muscle tissue, in general, is low in transglutaminase.

Result of Genetic Mutation

"In this view, atherosclerosis is the result of a genetic mutation, either brought about spontaneously or by some outside effects—like feeding a high-cholesterol diet to rabbits."

Dr. Laki suggests that freshly formed clots blocking diseased vessels be tested to see if the addition of thrombin to the homogenized thrombus releases fibrinopeptides and if the dipeptide, γ-glutamyllysine, can be isolated.

If such a study were to confirm his proposals, Dr. Laki believes, the next step would be to find specific inhibitors of the transglutaminase system.

Is NIH's Control Over Research Being Removed?

Continued from page 1

versity of Michigan at Ann Arbor; Philip Handler, Ph.D., president of the N.A.S.; Dr. Robert Q. Marston, former head of the National Institutes of Health, fired by the Nixon Administration; and Dr. Jesse Steinfeld, former U.S. Surgeon General; and Dr. Robert W. Berliner, former scientific director of the NIH, now dean of the Yale Univeristy School of Medicine.

MEDICAL TRIBUNE is withholding identification of the other participants, some of whom are "household" names in the medical and biomedical research communities.

Former HEW Secretary Cohen told MEDICAL TRIBUNE of "the shattering impact" of the Administration's attempt to gain control of the research structure at the National Institutes of Health.

He charged that the White House "now calls the signals in biomedical research."

May Harm Research Setup

Some of those at the meeting expressed fears that the Administration—via the White House's Office of Management and Budget and the Secretary of Health, Education, and Welfare, Caspar Weinberger—is doing serious harm to the country's research structure.

A top HEW official, however, described the White House's position as a belief that "research is an open hole; it can absorb all the money you can throw into it. We've got to get some control over it. There is a limit to how much we are willing to spend."

The alleged policy of research structure containment, Mr. Cohen stated, has caused "a state of anxiety, frustration, and concern at NIH," a feeling that there is not enough reliance on the scientific and professional skills of NIH's researchers, with outside forces now making research policy.

"Fundamentally, this is a very upsetting thing," Mr. Cohen added, warning that the administration's new approach "is very unwise."

The abolition of the NIH's scientific advisory committees, the leveling off of basic research funds in favor of expanding cancer research and contract research, the firing of NIH officials, and the Bureau of the Budget's review of research policies—"coming all at the same time"—have spread alarm and dismay in the research community, he said. "There has never been a situation like this before. Do these political people understand biomedical research? Don't they realize that contract research won't get the job done quicker?" Mr. Cohen asked.

He contended that "you've got to give [the NIH research structure] a lot of leeway" and questioned the Administration's entire attitude toward research.

Dali Winners, 5th List

1. ANDREWS, JAMES C., M.D., 801 East High Street, Charlottesville, Va.
2. APPLE, GEORGE W., JR., M.D., Box 158, Plano, Tex.
3. AUSBON, W. W., M.D., 447 5th Avenue South, Naples, Fla.
4. BENZ, CHARLES C., M.D., 1322 N. Vermont Avenue, Los Angeles, Calif.
5. BERLANGA, RAFAEL, M.D., 111 7th Street, Garden City, N.Y.
6. BLAKEY, LESLIE W., M.D., 1221 S. Broadway, Lexington, Ky.
7. BOESKY, DALE, M.D., P.C., 2401 W. Big Beaver Road, Troy, Mich.
8. BRENDZE, ROBERT B., M.D., Zero Emerson Place, Boston, Mass.
9. BROWNING, C. M., D.O., 225 S. Main, Memphis, Mo.
10. BRYANT, FRANK L., M.D., 4421 Creswell, Shreveport, La.
11. CAMARDA, ANTHONY I., M.D., 690 Clinton Avenue, Bridgeport, Conn.
12. CHANDLER, WILLIAM M., M.D., 6728 Point Drive, Edina, Minn.
13. CHRISTIAN, JOHN D., M.D., 5520 W. Markham, Little Rock, Ark.
14. COLE, LARRY W., M.D., 228 N. Cascade, Suite 201, Colorado Springs, Colo.
15. COMMINGS, PETER, M.D., 915 19th Street, N.W., Washington, D.C.
16. COODLEY, ALFRED, M.D., 10921 Wilshire Boulevard, Los Angeles, Calif.
17. COZEN, HAROLD, M.D., 2326 Redondo Beach Boulevard, Gardena, Calif.
18. CROWELL, THEODORE, M.D., 2223 E. Day Island Blvd., Tacoma, Wash.
19. DAVIS, PAUL H., M.D., 636 Beacon Street, Boston, Mass.
20. DEAN, GILBERT O., M.D., 220 Ridgeway, Little Rock, Ark.
21. DEMAREST, AUDREY P., M.D., 110 Clarke Street, Syracuse, N.Y.
22. DERMOTT, ROBERT V., M.D., 141 Camino Alto, Mill Valley, Calif.
23. DONOVAN, JAMES M., M.D., 1325 S. 72 St., Omaha, Neb.
24. DUNCAN, FURM M., JR., M.D., 2318 E. Kessler, Longview, Wash.
25. EDELSTEIN, JOSEPH B., M.D., 358 Park Avenue West, Mansfield, Ohio
26. ENGLISH, R. E., D.O., 5509 Central Avenue, N.W., Albuquerque, N. Mex.
27. FOSTER, JULIAN L., M.D., 3500 South University, Little Rock, Ark.
28. DE FREITAS, GABRIEL F., M.D., 909 East Brill Street, Phoenix, Ariz.
29. GANG, LAWRENCE B., M.D., 1016 6 Avenue, Huntington, W. Va.
30. GARLICHS, RICHARD W., M.D., 216 N. Manoa Road, Havertown, Pa.
31. GENENDER, STEPHEN E., M.D., 10001 Venice Blvd., Los Angeles, Calif.
32. GEORGE, RICHARD L., M.D., 902 Second Avenue North, Columbus, Miss.
33. GOLDSTEIN, SIDNEY, M.D., 1043 Pinenut Court, Sunnyvale, Calif.
34. GOLPER, MARVIN N., M.D., 411 Morningside Drive, Kokomo, Ind.
35. GOODWIN, G. V., M.D., 12 State Street, Montpelier, Vt.
36. GRAD, ED., JR., M.D., 5541 Fox Road, Cincinnati, Ohio
37. GRANDT, EDWARD J., M.D., 600 Ivy Street, Elmira, N.Y.
38. GREENLEE, ROBERT L., M.D., 227 E. Washington Blvd., Fort Wayne, Ind.
39. GREENWOOD, C. W., M.D., 2030 Doctors Park Drive, Columbus, Ind.
40. HABER, MORDECON, M.D., 2070 Main Street, Fort Myers, Fla.
41. HAGLER, SUMNER, M.D., Golf Mill Prof. Bldg., Niles, Ill.
42. HALLABA, M. A. S., M.D., Medical Arts Bldg., Joplin, Mo.
43. HANDANOS, VASSILIOS, M.D., 13 Royal Avenue, Rumford, Me.
44. HARRIS, JOSEPH H., M.D., 2417 Capital Avenue, Sacramento, Calif.
45. HESTER, JOE, M.D., 419 Cumberland Drive, Muskogee, Okla.
46. HILBERT, JOHN F., M.D., 409 West Main Street, Dothan, Ala.
47. HIRSHLEIFER, IRVING, M.D., 1080 N. Indian Ave., Palm Springs, Calif.
48. HORTING, HUGH R., M.D., 4400 Lindell Boulevard, St. Louis, Mo.
49. JACOBSEN, L. W., M.D., 122 W. Colorado #207, Dallas, Tex.
50. JEWELL, PATRICK F., M.D., 823 Three Mile Dr., Grosse Pointe Pk., Mich.
51. JONES, PAUL G., JR., 56 Ardsley Avenue N.E., Concord, N.C.
52. JOSEPH, DONALD J., M.D., Univ. of Missouri Med. Ctr., Columbia, Mo.
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55. KLINGER, MORRIS, M.D., 833 Milan Street, New Orleans, La.
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58. LITCHMAN, HENRY, M.D., 39 Hartwich Road, Providence, R.I.
59. LITTER, LEO, M.D., 21 Woodland Street, Hartford, Conn.
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61. MALLER, DRADOLPH M., M.D., 850 Irving Park Road, Chicago, Ill.
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63. MCDOWELL, BERT, M.D., Box 1270, Scottsdale, Ariz.
64. MCENANEY, JAMES E., M.D., 376 18th Street S.W., Owatonna, Minn.
65. MEDINA, ANIBAL, M.D., 1st National Towers, Hays, Kans.
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67. MONTO, GEORGE L., M.D., 7008 Bellrose N.E., Albuquerque, N. Mex.
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71. PETRY, JOHN A., M.D., 6107n Bardstown Road, Fern Creek, Ky.
72. PHELPS, DALE G., M.D., 1543 E. Donald, Waterloo, Iowa
73. PIEPER, SAM, JR., M.D., P.O. Box 484, Oak Ridge, Tenn.
74. REED, ROBERT M., M.D., 314 Medical Arts Bldg., Nashville, Tenn.
75. REYNOLDS, HUGH, M.D., 3213 Dauphin Street, Mobile, Ala.
76. RIVES, HUGH F., M.D., P.O. Box 870, Jacksonville, Tex.
77. ROBERT, A., M.D., 259 W. 4th Street, New York, N.Y.
78. ROCKWOOD, P. H., M.D., 615 S. Mill Street, Fergus Falls, Minn.
79. RYO, U. YUN, M.D., 2929 S. Ellis Avenue, Chicago, Ill.
80. SAGER, JOHN H., M.D., 2141 K. Street N.W., Washington, D.C.
81. SARNI, ROBERT P., M.D., 1200 Reservoir Avenue, Cranston, R.I.
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83. SCHMIDT, ROBERT B., M.D., 5310 Kingsway West, Cincinnati, Ohio
84. SHUBIN, HARRY, M.D.P.C., 1829 Pine Street, Philadelphia, Pa.
85. SIGDA, FRED J., M.D., Clinic Drive, Madisonville, Ky.
86. SKRIVANEK, D. A., M.D., 903 W. Lampasas Street, Ennis, Tex.
87. SMIDT, JAMES A., M.D., 322 West McDowell Road, Phoenix, Ariz.
88. SOUCHERAY, JOHN, M.D., 222 Central Medical Bldg., St. Paul, Minn.
89. STAUFFER, MARY R., M.D., 11411 Brookshire Avenue, Downey, Calif.
90. STEWART, WILLIAM W., M.D., 2600 Gordon Road S.W., Atlanta, Georgia
91. TEYAN, FREDERICK, M.D., 61 Hempstead Avenue, Rockville Centre, N.Y.
92. TIPTON, H. B., M.D., 745 Buena Vista, Lander, Wyo.
93. TOLAND, CHARLES W., M.D., 1234 Commercial, S.E., Salem, Ore.
94. TURNER, RALPH J., M.D., 338 Bonhill Road, Los Angeles, Calif.
95. VILLAMENA, DIODATO, SR., M.D., 159 E. 80th Street, New York, N.Y.
96. WAGONER, B. D., M.D., R.R. 2, Union City, Ind.
97. WATSON, WALTER B., M.D., 1303 E. 3rd Street, Casper, Wyo.
98. WIGSER, MARCUS, M.D., 506 Oak Street, Cincinnati, Ohio
99. WOODRUFF, ROBT C., M.D., 400 Newpt. Ctr. #608, Newport Beach, Cal.
100. ZABLOUDIL, WARREN C., M.D., Haskell Road, Burlington, Iowa

'Keiro' Means Home for Elderly

Courtesy of California State Department of Health

The word "keiro" means "nursing home for the respected elders," making it an appropriate name for a nursing facility in Los Angeles that was constructed with funds donated by the Japanese-American community and molded to Oriental tastes.

Anterior Urethral Valve Seen In Some Obstruction Cases

Medical Tribune Report

CHICAGO—Boys with signs and symptoms of urethal urinary obstruction should be carefully evaluated for anterior urethral valves, the American Academy of Pediatrics was told here. The diagnostic work-up should include voiding films during cystourethrography, careful urethroscopy, and examination of the anterior urethra—particularly when there are obstructive symptoms.

Although posterior urethral valves have been recognized as a relatively common cause of severe bladder outlet obstruction, anterior urethral valves have received much less attention "and even today are not always included in the differential diagnosis of boys with symptoms suggesting bladder outlet obstruction," stated Drs. Casimir F. Firlit and Lowell R. King, of the Department of Urology, Northwestern University, and the Division of Urology, the Children's Memorial Hospital, here.

The Chicago urologists warned that the anterior urethral valve may easily be overlooked at initial evaluation. To avoid missing the defect, a lateral or oblique view of the entire urethra must be obtained during voiding cystourethrography. "Similarly, the anterior urethra must be carefully examined at the time of cystoscopy."

Although review of the literature revealed only 14 reported cases, an additional seven boys were found among the 74 urethral valve patients diagnosed and treated at Children's Memorial Hospital from 1952 to 1971. The remaining 67 had posterior urethral valves.

Most patients presented for urologic evaluation because of impeded urethral urinary flow, although one was brought for examination because of urinary tract infection. Ages of the patients ranged from two days to 11 years. "Two patients less than one week of age who were found to have anterior urethral valves have been seen within the last 18 months. . . . Of the seven boys with anterior urethral valves, two presented with large urethral divorticula, which, of course, suggested the proper diagnosis."

Drs. Firlit and King cautioned that "several of the patients underwent repeated hospitalizations because of symptoms suggesting intravesical obstruction before the proper diagnosis was made." Early diagnosis, they continued, should minimize the morbidity associated with unnecessary or inappropriate surgery and reduce the incidence of urinary tract infection.

Specifically, they recommend transurethral resection and/or fulguration for anterior urethral valve. When the condition is associated with a diverticulum, they perform open resection of the valve together with excision of the diverticulum, with suprapubic cystostomy for temporary diversion.

Did You Say Dali? Here's a Story To Go With Print

Medical Tribune Report

Last week the genius and unpredictable character of Dali as revealed in his autobiography, *The Secret Life of Salvador Dali*, was discussed by Dr. Arthur M. Sackler, international publisher of MEDICAL TRIBUNE, in his column. Another revealing story comes from John Gruen, whose book *The Party's Over* is an art history of the 1950s. Mr. Gruen was working as a clerk in Brentano's bookstore when, as he describes it, "Dali walked up to me and asked if I had a copy of his *Secret Life of Salvador Dali*. I quickly fetched the book and said, 'Here you are, Mr. Dali.'

"He asked whether I had read it, and I had to admit that I hadn't. He then said that he would take the book, and would I gift-wrap it. I did so with alacrity and handed him the package.

"He now handed the book back to me saying, 'Take it. It is my gift to you. Would you like me to autograph it for you?' I tore open the gift wrapping, found him a pen, and, in the largest possible letters, he scrawled his name—and mine—upon the frontispiece. Mr. Dali omitted one vital step in the transaction. He walked out of the shop without paying for the book. Needless to say, the book still rests upon my bookshelf—Brentano's gift to me."

PAHO Reports Smallpox Eradicated in Americas

WASHINGTON—The Pan American Health Organization reports that smallpox has been eradicated from the Americas. The last case of the disease was reported on April 19, 1971, in Brazil.

Efforts to eradicate smallpox in the Americas started in May, 1949, when member governments adopted a resolution urging massive vaccination.

Between 1948 and 1971, in American countries in which the disease was endemic, 208,575 cases are known to have occurred.

When G.I. complaints occur in the absence of organic findings, underlying anxiety may be one factor

The influence of anxiety on gastrointestinal function

Excessive anxiety and tension can adversely affect the function of any portion of the gastrointestinal system. Complaints are varied, *e.g.*, epigastric pressure, heartburn, ulcer-like pain, diarrhea, etc. A vicious circle may develop in which anxiety and G.I. disorders intensify each other.

Prime objectives of total patient therapy include: symptomatic relief, removal of apprehensions about organic disease and helping the patient understand how excessive anxiety may trigger physical complaints. Brief counseling and the utilization of favorable factors in the patient's personality and environment can often provide needed support.

Antianxiety therapy

Antianxiety medication may prove a valuable supplement when counseling and reassurance are not sufficient to allay the patient's emotional distress and relieve his anxiety-provoked physical complaints. The agent prescribed should be both clinically effective and generally free from undesirable side effects. Librium meets these requirements with a high degree of consistency, and has a wide margin of safety and an excellent record of patient acceptance. The most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated.

Whenever anxiety is a clinically significant factor, adjunctive Librium is used concomitantly with specific gastrointestinal drugs, such as anticholinergic agents. Once anxiety has been reduced to appropriate levels, treatment with Librium should be discontinued.

For relief of excessive anxiety

adjunctive

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

Dialysis Payment Fight Unites Nephrologists

Medical Tribune Report

WASHINGTON—Nephrologists across the country are uniting to fight the Department of Health, Education, and Welfare and the Social Security Administration on what the physicians regard as misadministration of the new Federal program intended to pay for 80 per cent of the costs of kidney transplantation and dialysis.

The SSA is currently some $60,000,000 in arrears in payments to hospitals and dialysis centers, and HEW has refused to allow separate fee-for-service payments to private nephrologists who are providing "normal" treatment for stable dialysis patients.

HEW's claim is that stable patients do not require regular supervisory care of nephrologists, that any costs for such care are part of the dialysis unit's administrative overhead and are included in the lump-sum payment the SSA makes to dialysis providers, and that nephrologists should therefore arrange with the centers for any remuneration.

Dr. Eli A. Friedman, chief of dialysis at Downstate Medical Center, Brooklyn, called the Government's new rules "a national scandal." A similar fee problem exists for private nephrologists who provide consultation and treatment services for kidney transplant patients.

The SSA has also ordered a freeze on the certification of new dialysis centers as of the date the dialysis funding law took effect—July 1.

According to Irwin Wolkstein, deputy director for policy of the SSA's Bureau of Health Insurance, to allow new certifications at this time "would be an invitation for entrepreneurs to open additional facilities . . . and when you have too many centers you increase the cost of the care and lower the quality."

The freeze has stalled a proposed unit in Brooklyn intended to be the referral center for six hospitals.

"We are holding patients suboptimally because the Brooklyn Kidney Center is unable to open," Dr. Friedman said, "and I have no other place to refer them. Some of these patients may die while waiting for the center to open."

The SSA told MEDICAL TRIBUNE that a decision on allowing some limited new certifications—"exceptions"—is due soon.

One of the nephrologists' complaints is that although the new funding legislation was enacted last year, the SSA issued interim guidelines only one business day before it went into effect.

In New Jersey, a group of nephrologists have banded together to file suit in U.S. District Court charging the SSA with illegally promulgating the interim rules without required hearings and notice. The group hopes to secure a restraining order against restrictions in the regulations.

SSA Says It Will Catch Up

The SSA admits the situation is confused but claims it will catch up with bills from dialysis centers by early next year. It has emergency provisions, it says, for immediate payment to any certified centers that are in dire financial straits as a result of the payment lag.

In many areas, nephrologists who have not contracted with dialysis centers for remuneration are not being paid.

Dr. Robert S. Rigolosi, director of nephrology at Holy Name Hospital in Teaneck, N.J., reported that the SSA's guidelines and failure to pay what it owed "immediately created difficulty for all existing dialysis centers and threaten every dialysis unit in the country."

Dr. Rigolosi said that HEW's view that stable dialysis patients require no care by nephrologists is unrealistic.

At Holy Name Hospital "there are nephrologists treating dialysis patients who are working without pay, but we have made a pledge that we will treat these patients regardless" of the HEW rules, Dr. Rigolosi stated.

Dr. Robert G. Muth, director of nephrology at Research Hospital and Medical Center, Kansas City, Mo., reported that nephrologists there are also working without pay but said he is submitting documentation that nephrologists' services are required and is billing the Government for these services. He is uncertain whether the SSA will allow the claims.

Dr. Adrian I. Katz, head of the nephrology section at University of Chicago Hospital and Clinics, said he "fully disagreed" with the HEW refusal to cover fee-for-service charges by nephrologists.

Dr. Morrell M. Avram, director of the nephrology division of Long Island College Hospital and director of the new Brooklyn Kidney Center, complained that "the dialysis patient does not have a physician any more, and these are the physicians who trent the sickest of patients."

Downstate's Dr. Friedman charged that HEW, by declaring the services of nephrologists to stable patients are a part of the over-all administrative costs of the operation of dialysis centers, "in one fell swoop, socialized medicine for nephrologists."

"What this has done is to force the nephrologist to become a salaried employee of the hospital," he said.

"HEW does not understand the urgency of this situation," Holy Name's Dr. Rigolosi commented.

The SSA has set an all-inclusive limit of $150 per dialysis on its payments for stable patients, although, according to an HEW spokesman, "we will pay more than $150 when good reasons can be shown" for a higher charge.

Dialysis charges are said to vary around the country from a low of $120 by some centers in New York City to some $250 per dialysis in Los Angeles, Dr. Friedman noted.

But Dr. E. L. Becker, of New York Hospital–Cornell Medical Center, president of the National Kidney Foundation, was more sympathetic to the SSA and its regulations.

"The problems here are of such magnitude," he said, "that it will take time for them to be worked out."

The SSA's Mr. Wolkstein admitted that the agency is "not up to date with our billings." He said that it will take some months for the system to get into reasonably good order.

Hormone Test Helps In Choosing Therapy For Tumor of Breast

Continued from page 1

ent with prolactin and estrogen or prolactin and testosterone, it would seem wise to combine both antiprolactin and anti–sex hormone measures. In this way it is hoped that such methodology may replace the surgical lottery that at present faces the individual patient with recurrent breast cancer."

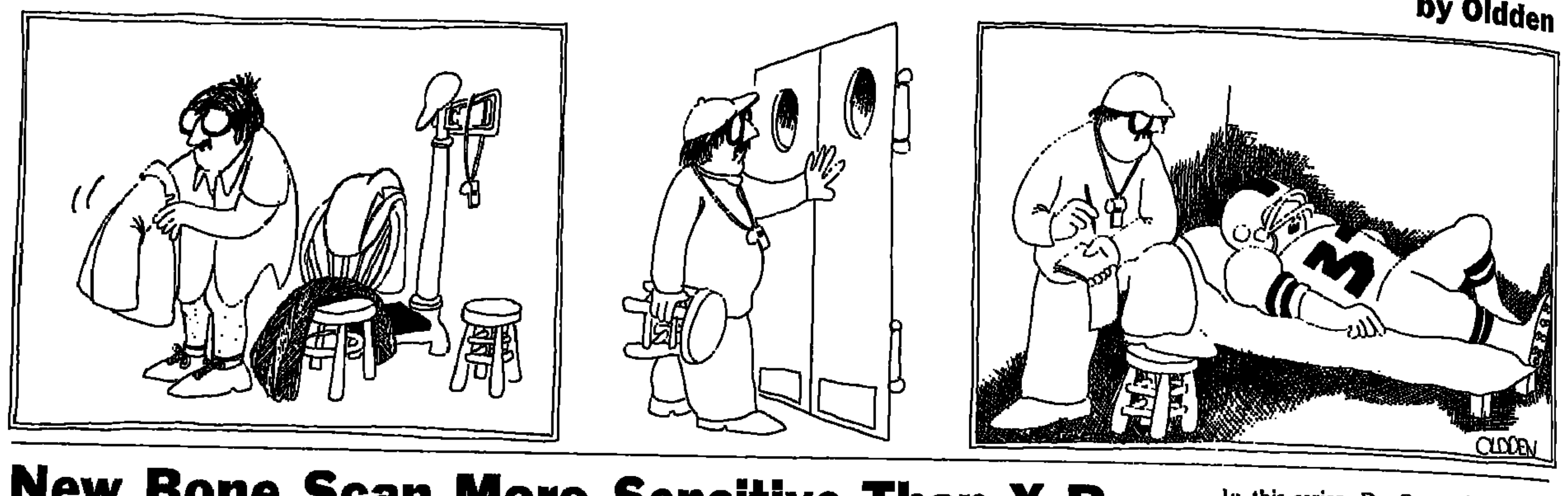
Regressions of three to 18 months have been observed in hormone-dependent breast cancers following therapy suggested by the diagnostic technique developed by his tumor biology group, Dr. Hobbs said.

"As such, the in vitro test can spare a breast cancer patient with a hormone-dependent tumor an unnecessary operation. Although we cannot speak of a cure of breast cancer in any sense at this time, we believe that the test offers the patient a somewhat more comfortable life while under treatment."

In recognition of the value of the test, Dr. Hobbs and his group were recently awarded the prestigious Paul Martini International Prize. His colleagues include Drs. Herschel Flax, Hussein Salik, William Brander, and Kenneth Newton.

Clinical Trials

by Oldden



New Bone Scan More Sensitive Than X-Ray

Medical Tribune World Service

MONTREAL—Bone scanning with technetium[99m]-labeled diphosphonate is substantially more sensitive than x-ray in detecting metastatic disease, Dr. John D. Osmond III of the Massachusetts General Hospital reported to the American Roentgen Ray Society meeting here.

Dr. Osmond's conclusion was drawn from the first 800 scans done at Massachusetts General with this new organic bone-scanning agent, developed at the hospital early in 1971 by Castronovo and Callahan. Technetium[99m] scans were compared with conventional roentgenographic studies of osseous metastases in 259 patients with histologically proven breast, prostate, and lung carcinomas.

Both bone surveys were conducted within a two-week interval; scans and standard x-rays were interpreted by two separate teams, each with two different radiologists. Although the scanner is a more sensitive detector of lesions, able to find some metastases missed by x-ray, x-ray was needed to interpret 10 per cent of the scans in this series.

Scan and x-ray were both positive in 17 per cent of the 259 patients studied; in another 13 per cent with positive scans and positive x-rays some metastases demonstrated by scan were missed by x-ray. Nineteen per cent demonstrated positive scans and negative x-rays. Although 2 per cent of these patients had negative scans and positive x-rays, only three of the lesions in these false-negative scans were active.

Because scanning lacks the obvious visual clarity of x-ray, interpretation may be difficult when scans are positive and patients have single metastases or such other problems as degenerative joint disease, hyperostotis frontalis interna, and Paget's disease. However, the scan's ability to pick up multiple bony metastatic sites and to locate those missed by x-ray are its outstanding features.

In this series, Dr. Osmond said, there were 131 patients who "demonstrated evidence of bony spread of tumor. Forty-eight of these patients, or 37 per cent of the total number with metastases, had roentgenographic studies that were interpreted as normal. From this same group of 131 patients demonstrating evidence for metastases, 84 patients demonstrated increased information on the scan . . . a 63 per cent improvement in the sensitivity of detection of metastatic disease."

Immune Response To Cancer Indicated By Lymphocyte Test

Medical Tribune Report

CHICAGO—An in vitro test of a patient's ability to mount an immunologic response against cancer has been developed by a group at U.C.L.A.

Dr. Theodore X. O'Connell told the American College of Surgeons here that the test can be performed immediately, with no need to sensitize the patient first, permitting therapy to start sooner. Serial studies may be performed to determine changes in the immune response as a result of therapy or course of disease.

Dr. O'Connell and his investigative team found that lymphocytes from cancer patients exhibit a depressed response in blastogenic lymphocyte-function tests. "The deficit is not related to the stage of disease. Many patients with rather localized disease are markedly immune deficient. We would expect that they would have a difficult time containing their tumor and should have a rapid spread of their disease."

Heart Muscle Can Be Saved If Revascularized Quickly

University of Hawaii Investigators

► If the heart muscle damaged by coronary occlusion can be revascularized within four hours, some of the muscle area can be preserved, said Dr. John R. Soeter, University of Hawaii School of Medicine, Honolulu.

Dr. Soeter and his collaborators studied the progression of the size of infarcts in monkeys following acute obstruction of a major cornary artery and the effect of restoration of blood flow on the size of the infarcts. Tissue studied indicated that revascularization up to four hours after the occlusion decreased infarct area.

4 or More Risk Factors Hike Bypass Mortality

Medical Tribune World Service

TORONTO—Any combination of four or more of seven hemodynamic risk factors in patients undergoing emergency aortocoronary bypass surgery for impending myocardial infarction results in greatly increased mortality, according to Dr. Roque Pifarré, of the Department of Surgery, Loyola University Medical Center, Maywood, Ill.

The seven evaluative risk factors are congestive heart-failure, more than three-vessel coronary disease, left ventricular end-diastolic pressure greater than 12 mm. Hg, cardiac index less than 2.7 L./minute/sq. M., stroke index less than 35 ml./beat/sq. M., estimated cardiac work less than 240 units (mean aortic pressure times cardiac index), and ejection fraction less than 0.50.

Dr. Pifarré and a group of colleagues studied 40 patients who underwent the procedure during the six-month period from January through June, 1973. Fewer than four of the risk factors were present in 26 patients, and there were no deaths in this group. The 14 patients with four or more risk factors had a mortality of 36 per cent, he reported here to the annual meeting of the American College of Chest Physicians.

Although the follow-up periods are still too short for complete conclusions, "the early results show that surgically treated patients have an improved quality of life in the early postoperative period," Dr. Pifarré said.

Four patients died, a surgical mortality of 10 per cent, and the postoperative infarction rate among the 36 survivors was 3 per cent (one patient), figures that compare favorably with the outcomes for similar patients treated medically. Dr. Pifarré said that for such patients "a mortality of 6 per cent in anticoagulated patients after two months and of 50 per cent in those without anticoagulation has been reported."

Accelerated Angina Noted

All 40 patients had preinfarction or accelerated angina, Dr. Pifarré said; this is characterized by increasing frequency and severity of anginal attacks in a patient either with previously stable angina or without previous angina. "The severity and frequency progress to incapacity, and rest or nocturnal angina is quite common," he noted. "In most cases there are no enzyme changes and only transient ischemic changes in the ECG. Many of the patients develop myocardial infarctions or arrhythmias, which can further compromise a cardiac reserve already altered."

In this study, there were 10 women and 30 men, 38 to 67 years old. Five were under medical treatment for hypertension; 17 had at least one previous myocardial infarction. Onset of symptoms varied from four weeks to 15 years before the patient's admission to hospital, with progressive aggravation of pain and disability for one to two weeks. After recent myocardial infarction was ruled out by serial enzyme determinations and ECG patterns, the patients underwent coronary angiography and left heart catheterization; 90 per cent were operated on within 24 hours of study; those who were delayed for more than 24 hours were anticoagulated with heparin to maintain a twice-normal clotting time.

Using reversed segments of saphenous vein, the surgeons implanted 85 aortocoronary bypasses. Based on the number of diseased vessels, patients were divided into four groups. The first consisted of 19 patients with three or more diseased vessels; 11 of these had three bypasses each and eight had two each. In three of the four deaths in this highest-risk group, cardiopulmonary bypass could not be discontinued. In the fourth, the patient died 10 days postoperatively from a massive anterolateral myocardial infarction.

In the second group, 16 patients had two diseased vessels. Fourteen had complete revascularization with a double bypass, and one was completely revascularized with a triple bypass. The remaining patient had a single bypass.

Three patients in group three with isolated lesions in the left anterior descending had a single bypass.

Finally, in the fourth group, two patients with 90 per cent occlusion of the main left coronary artery received double bypass to the left system.

"It becomes clear that when the function of the ventricle is poor, the patient is more likely to do poorly," Dr. Pifarré said in an interview with MEDICAL TRIBUNE. "If we have a patient or a group of patients with more than four of the risk factors, we know that the risk is likely to be much higher than we would like to accept." His group considers that this type of coronary surgery "should today carry with it a risk of less than 5 per cent, and if there are more than four risk factors present, we know the 5 per cent figure will be surpassed."

Dr. Pifarré's co-workers in the study were Drs. John M. Moran, Rimgaudas Nemickas, Patrick J. Scanlon, James V. Talano, John F. Moran, Rolf Gunnar, and John R. Tobin, of the Departments of Surgery and Medicine, Loyola University Medical Center, and the Cardiopulmonary Surgical Section, Veterans Administration Hospital, Hines, Ill.

Once the bypass graft is in place, there may be other problems, however. One difficulty, the development of cardiac arrhythmias during selective aortocoronary bypass graft angiography, was successfully prevented by right atrial pacing. Drs. Kenneth B. Desser and Alberto Benchimol, of the Institute for Cardiovascular Disease, Good Samaritan Hospital, Phoenix, Ariz., told the meeting.

Postoperative Pain Cited

Speaking for the team, Dr. Desser noted that aortocoronary bypass grafts, now in relatively widespread use, clearly effect major degrees of myocardial perfusion; but, because of the postoperative recurrence of pain, coupled with the need to determine the anatomic status of the graft, there has also been an increasing use of selective aortocoronary graft arteriography. During graft opacification with contrast media, there have been "cardiac arrhythmias akin to those noted during selective coronary ateriography."

Routine right atrial pacing, he said, is "a useful method for the prevention of a variety of adverse electrical and hemodynamic abnormalities" during bypass angiography. Drs. Desser and Benchimol analyzed the results in 30 male patients who had aortocoronary bypass graft implantation for angina that was refractory to medical treatment. Ages ranged from 42 to 70 years with a mean of 54. Isolated right coronary grafts were implanted in 10 patients, 12 had isolated left anterior descending coronary grafts, seven had combined right and left anterior descending grafts, and one had grafts to the right, left anterior, and circumflex vessels. There were, therefore, 39 patent grafts in 30 patients.

Two injections of contrast medium (75 per cent Hypaque) were made into each graft with a hand syringe. The first injection was made without atrial pacing, the second during right atrial pacing, which was begun one minute before the injection. "Pacing was initiated at the lowest driving rate which resulted in the most complete and consistent right atrial capture at twice the stimulating threshold," Dr. Desser said.

Of the 39 angiograms done without pacing, cardiac arrhythmias occurred in 31. "In contrast, only two of 39 saphenous vein bypass injections performed during right atrial pacing resulted in cardiac arrhythmias."

Typically, without pacing there was sinus bradycardia, a rate less than 60/minute. Salvos of ventricular premature depolarizations with the bradycardia, sinoatrial arrest, and A-V junctional escape beats were common. In one unpaced patient, there was complete atrioventricular block.

Britain's NHS at 25: A Matter of Saving the GP

Continued from page 1

into impoverishment. The choice was to enter another specialty or to emigrate."

A single detail may help to highlight his point: a study nine years ago showed that 35 per cent of physicians' offices lacked a washbasin.

How had the service that was launched with such high hopes and genuine social commitment reached this nadir? And how did it make its comeback?

The stability that now prevails may well testify to the system's capacity for accommodating itself to change. It certainly testifies to two other factors—the serious miscalculations made by the founders of the NHS about the cost of a national health care program and the equally serious miscalculations by the profession about the cost of keeping a general practitioner in reasonable financial health.

Carry Some Useful Lessons

Both points come down to a question of money and carry some useful lessons.

The Beveridge report of 1945, laying the basis for the health service, had estimated that expenditures would run at the sterling equivalent of about $800,000,000 a year and would remain essentially unchanged for the next 20 years. The reasoning—astounding as it may be in hindsight—was that the costs of health care would go down as the nation's health improved under a comprehensive health care delivery system.

In fact, NHS expenditures rose from about $830,000,000 in 1948-49, when the service was launched, to more than double five years later—a rise accompanied by the continuing political drumbeat of accusations from the House of Commons that the NHS was riddled with waste and extravagance.

Inflation, of course, accounted for some of the rise, and a growing—rather than declining—popular demand for medical services came into being with the availability of comprehensive care.

The political results of this miscalculation, which had consequences for years to come, were summed up recently by Rudolf Klein, of London's Centre for Studies in Social Policy: "The NHS was [placed] on the defensive. The main anxiety of its administrators seems to have been to protect themselves against the accusation of wasting public money, rather than explore the best ways of spending it."

On its side, the medical profession contributed a formula for paying the general practitioner that was to haunt it for nearly two decades. As a condition for participating in the proposed health service, the profession insisted, and the Government finally agreed, that G.P.s would not be placed on government salary—"We're not civil servants" ran the proud claim—but would become independent contractors, to be paid for the number of their patients annually. In contrast, specialists, hospital staffs, and public health physicians all accepted salaried posts.

Income Lower Than Others'

Ten years later, if the G.P.s were not going broke, they were overworked, underequipped, and understaffed, and their incomes were certainly not keeping pace with those of other professions.

In settling for a per capita rate of payment, they had also accepted the elimination of fee-for-service or any form of substitute remuneration. The G.P.s had agreed to provide year-round, 24-hour medical care for up to 3,500 patients per doctor. But no provision was made for the differing requirements of a healthy young adult, for example, and an aging couple with chronic ailments; or for complete obstetric services; or for after-hours house calls.

Nor was there any provision for equipment. The physician who wanted to provide a washbasin for his patients did so at his own expense, out of his per capita fee. From the standpoint of an economy-minded government, this was all to the good.

"The greater your attraction for the patient, or your interest in good medicine, the less money you had," MEDICAL TRIBUNE was told by a B.M.A. leader, who asked not to be identified. "The capitation system was virtually an inducement to poor service."

In retrospect, what is surprising is not that G.P.s began to emigrate but that so few did.

Sir George Godber, chief medical officer of the Department of Health and Social Security, in an interview with MEDICAL TRIBUNE, paid his tribute to the G.P.'s sense of responsibility in those days: "The fact is that the general practitioner, especially at the outset, carried the National Health Service on his shoulders. If he had not been available, the hospital outpatient services would have been swamped. The G.P.s saved the day. They were the key."

By the early '60s it was obvious that the NHS would have to save the G.P. if it was to survive, at least along the ambitious lines that were originally envisioned. A radically revised schedule of fees and allowances, amounting to a virtually new system of payment, was formulated and established through the joint effort of the B.M.A. and the Government.

Per capita payment remained as the heart of the G.P. contract. But this was cushioned by the following additional payments: a basic practice allowance, a basic allowance for "out-of-hours" calls, as well as an extra "out-of-hours" capitation fee for each patient in excess of 1,000 on the G.P.'s list; a larger capitation fee for each patient over age 65; and a basic fee for each patient receiving complete maternity services.

"Seniority" Allowances Graduated

There were additional allowances for physicians who settled in "underdoctored" areas or joined group practices, and there were graduated "seniority" allowances for years of service.

Equally important, the G.P. was completely reimbursed for his office rent and taxes and was reimbursed 70 per cent for the money he spent on office staff. If his office was part of his home, he was reimbursed for what it would have cost if he were renting the premises.

How much does this all come to in annual income?

On the British economic graph, the G.P. is doing neither badly nor outstandingly well. Most estimates agree that the British physician's earnings (including those of the specialist and the public health physician) place him in the upper 10 per cent of the population.

But at an average of £5,750 ($14,300) net for the general practitioner, and £7,599 ($19,000) net annually for a top specialist, it is obvious that the profession is somewhere in the low-middle segment of that 10 per cent.

The B.M.A., which compiled these data, as of April, 1973, stresses that the G.P. has more than doubled his net income since April, 1963, and that the specialist is 71 per cent better off. Further, the rates of increase for doctor's income are in excess of the cost-of-living rises for the same period.

It must be remembered, too, that these figures include only the earnings from fixed government salaries or contracts. Almost all specialists have a roster of private patients, bringing in anywhere from $5,000 to $20,000 more per year, and many G.P.s make extra money by contracting to serve as insurance, school, or hotel physicians.

Comparisons with the earnings of physicians in other nations, including those in Western European countries with national health programs of their own, are, in a sense, beside the point. Each system has its own history and its own value systems and has produced its separate allegiances.

"It must be remembered," said Dr. Ernest Colin-Ross, a London general practitioner, "that from most points of view the NHS was an improvement. Most physicians, except for those in fashionable areas, were not making much money in those days. The NHS was also an improvement for the physician who was not good at demanding payment of fees."

As for the present, he added: "I'll be shot for saying this: I don't need more money. I don't need a yacht. On the other hand, my attitude may not be typical."

"Money is not the real bone of contention," said Dr. Dennis Cook, secretary of the Inner London Medical Committee. "Physicians are currently more concerned about the terms of service and the complaint procedures, and the demands upon them, than about their incomes. The majority of physicians are not irked by the incomes they earn. There are 2,000 G.P.s on the list of the inner London Executive Council, and last year only one suffered financial embarrassment."

Studying Continental Counterparts

On the other hand, there is no doubt that the profession is looking closely at the earnings of its Continental counterparts, especially since Britain's entry into the Common Market. And while strict comparisons are difficult, it would appear that the doctor in other European health insurance programs may be earning more than his British colleague. The reason is held to stem from the fact that all of the European insurance programs are based on one or another form of fee-for-service, rather than capitation. No one here, however, is calling for an end to the capitation system.

As for comparisons with the United States, a fairly prevalent viewpoint was voiced by Dr. James Bramble of Leeds, former head of the militant Young Hospital Staff Physicians and now deputy chairman of the B.M.A.'s Junior Hospital Staff Group Committee.

"I'm not suggesting that we want as much as doctors in the United States," he said. "We don't need that much. We could use more, of course. Chiefly, what we need is a reduction in the pressure on us. You must remember that those of us in my generation have never known a situation of private practice. I think that the majority of us would like to see private practice preserved, mainly as a standard of comparison.

"The NHS is a fantastic boon to the average member of the community. Though our health care may not be as good as some of the very highest practiced in the United States, it is consistently good, immediately available, and strong on rehabilitation.

"The stress is on total care, and treatment by the G.P. or the specialist is only a small part of that concept, especially in cases of chronic illness. The physician is only part of the team, the head chap."

Currently, as Dr. Cook stressed, terms of service are more immediately pressing than problems of money, although that subject is never, of course, far below the surface.

Any discussion of terms of service—meaning largely the rules governing the doctor's obligations to his patients—has to start from the fact that the British G.P. is under contract to provide all "necessary and proper" care for every man, woman, and child on his list.

The contractual commitment is a round-the-clock commitment: the physician is responsible for 24 hours of care a day and must meet that responsibility himself or deputize another physician in his place. The NHS contract provides an allowance for "after hours" deputies.

As a result, Dr. Cook pointed out, the physician is vulnerable to excessive demands from patients, some of whom may consult him more often than their ailments would seem to justify.

"The most common complaint we get," he said, "is that the doctor refused to make a home visit. The G.P. has the right to refuse a house call if, in his judgment, it is not warranted. But if it is successfully proved that a visit was called for, the physician is in breach of contract, and subject to a fine—or to a malpractice suit if the patient wants to pursue it that far."

A physician may run into trouble, for example, by reassuring a patient on the phone that his symptoms are probably due to an "upset stomach" when, in fact, a coronary occlusion is in progress.

"The second most common complaint," said Dr. Cook, "is the charge that the doctor failed to examine properly. 'The doctor didn't listen to my story. . . . He have a prescription without examining me. . . . He stood at the bed and didn't examine me.'"

Under law, a formal complaint must be investigated by the local Executive Council (composed of laymen and physicians) with whom the doctor has his NHS contract. Of 50 complaints investigated in the inner London area last year, Dr. Cook reported, the council decided 12 cases against physicians, finding that they had failed to make house calls that should have been made, or had delayed unreasonably in coming. In a 13th case, the Council agreed with a government complaint that a physician had falsely issued a certificate of illness to a worker who had been absent from his job.

Problem Not Very Serious

"Is the problem a serious one?" Dr. Cook asked rhetorically. "Not really. Fifty formal complaints a year in an urban area with 2,000 doctors and 3,000,000 patients is a comfortable figure! I myself practiced for 13 years without even knowing the terms of service in my contract. In all of that time there was one complaint against me and that was dismissed."

He added: "The extent of the problem can be seen by the size of the insurance premium to the Medical Defense Union: a general practitioner in Great Britain gets unlimited indemnity for £21 a year [$52]."

Next article: Emergence of general practice as a status specialty.

Study Finds No Link Of Coffee Drinking, Myocardial Infarct

Medical Tribune Report

OAKLAND, CALIF.—Available evidence does not support contentions that there is an association between coffee drinking and myocardial infarction, according to the authors of a study at the Kaiser-Permanente Medical Care Program here.

Such an association had been found in a study by the Boston Collaborative Drug Surveillance Program, and the authors who reported it in *Lancet* suggested then it might be due to "a substance or substances in coffee other than caffeine."

The authors of the Boston study also cautioned that the association might be based on the fact that "patients who drink [coffee] heavily and patients who develop myocardial infarction have similar personalities, and thus coffee drinking would only be indirectly related to myocardial infarction."

The California investigators decided there was no association between coffee and myocardial infarction after studying a group of 464 myocardial infarction patients, a group of ordinary controls, and a group of risk controls.

However, an association was found between coffee drinking and cigarette smoking; 34 per cent of the smokers drank more than six cups a day, while only 10 per cent of the nonsmokers drank that much.

The earlier Boston study had also found a strong correlation between coffee drinking and smoking.

Aaron's Physician Proves Good Prophet for Homers

Medical Tribune Report

ATLANTA, GA.—When Henry Aaron of the Atlanta Braves hits his 715th career home run next year, one of the loudest cheers will be from Dr. Robert E. Wells, Atlanta orthopedist and consultant to the Braves and a staunch admirer of the 39-year-old superstar.

Dr. Wells, one of the physicians who treat Hank Aaron, predicted more than a year ago that "Hammerin' Hank" would break Babe Ruth's long-standing major-league record of 714, long considered out of reach. The Babe set that mark 38 years ago.

In an interview with MEDICAL TRIBUNE (June 28, 1972), Dr. Wells said: "Speaking from a medical standpoint and as a baseball fan, I am confident that Hank Aaron will pass Babe Ruth's record. I'll make a guess that Aaron will hit his 715th home run early in 1974."

It is now obvious that Dr. Wells was a good prophet. His patient hit his 713th homer in his next-to-last game this year.

"It's hard to think of Hank Aaron as a patient," Dr. Wells said. "He's such an amazing athlete and a tremendous person. He has the body of a man six or eight years younger. As far as his physical condition is concerned, there is no reason why he should stop playing baseball."

Prediction Was Almost Wrong

"He was hitting home runs at such a fast clip in early and middle August that I thought he might break the record this year. As a matter of fact, I was pulling for him to do it even though it would have made my prediction wrong."

Dr. Wells pointed out that Aaron enjoyed a better year this year than last despite the fact that he played in fewer games. He belted 40 home runs this year, compared with 34 last year. No other 39-year-old player in baseball history has ever done that. Aaron ran up 96 RBIs this year, compared with 77 last, and scored 84 runs, compared with 75. His batting average was .301, against .265. Aaron played in 120 games and missed 42 this year.

"Aaron himself decides whether he is going to play in a particular game," Dr. Wells pointed out. "He rarely played in a day game after a night game, and he never played in both games of a doubleheader."

In the 1972 interview with MEDICAL TRIBUNE, Aaron said he would have to stay "free of injuries" to break Ruth's record. "If I can stay healthy," he said, "then I think I can do it."

Fortunately, Aaron has had no serious injuries or illnesses.

Dr. Wells reported that Aaron had "no problem" this year with an old knee injury—a partial tear of a cartilage—which had bothered him in the past.

"Aaron did have some muscular soreness of the upper and lower back, caused by fatigue," the physician related, "but a few days of rest and a little traction and heat straightened that out.

"He had a short episode of intestinal flu which kept him out of the lineup a few days. He also had stomach cramps for a couple of days while on the West Coast, but doctors who treated him there attributed the cramps to an infection that was going around."

Aaron has had only one fracture in his 20-year career as an outfielder in the National League. That was in his rookie year as a Milwaukee Brave when he broke an ankle. (The Milwaukee Braves became the Atlanta Braves in 1966.)

Dr. Wells said he does not know of any medication that Aaron takes except an occasional aspirin.

"He has no trouble sleeping," the physician said, "if he can get away from the ringing telephone."

Wherever Aaron goes now, he is besieged by autograph seekers, demands for newspaper, TV, and radio interviews, and requests for personal appearances of every kind imaginable. He has managed to stay remarkably cool, calm, and collected.

"Aaron is very stable emotionally," Dr. Wells observed. "He not only gives the external appearance of being a placid man, but he doesn't have any of the physical symptoms that go with emotional disturbances."

Extremely self-disciplined, Aaron has no trouble keeping himself in shape. He avoids eating "too much bread and potatoes" and keeps his weight at about 190 pounds—well distributed on his 6-foot frame. Neither Aaron nor anyone else has noticed any slowing down in his reflexes.

Aaron holds 11 major league and 18 National League batting records—more than any other player. Aaron and Willie Mays of the New York Mets are the only players to achieve both 600 home runs and 3,000 hits. Aaron leads all other players in history in total bases (6,424) and extra-base hits (2,133).

Called Consistent, Durable

"A lot of players have hit a lot of home runs for a few years," Dr. Wells commented, "but they haven't had the consistency and durability of Hank Aaron."

At the end of the 1973 season, Aaron said he was "disappointed" that he did not break Ruth's record this year, but he added: "I'm glad that I can look back and feel that I've had a good year." He said he planned to "rest up" and "get lost" for a few days. Aaron, who is divorced, also plans to marry a pretty Atlanta widow, Mrs. Billye Williams.

In the last game of the 1973 season, a crowd of more than 40,600 sat in a steady drizzle and watched Henry Aaron hit three singles and a pop fly—but no home runs. When he took his position in left field for the last time that day, the drenched crowd rose and gave Aaron an ovation that lasted more than five minutes.

Dr. Wells, one of the 40,600 who cheered, called it "one of the most exciting moments I've ever experienced in sports."

Hank Aaron's 700th home run—July 21.

Team Physician at Purdue Calls For National Survey of Sport Injuries

Medical Tribune Report

ATLANTA, GA.—Team physicians, trainers, and coaches should work with epidemiologists to develop a competent, ongoing, nationwide survey of athletic injuries, Dr. Loyal W. Combs, who is the team physician at Purdue University, said here.

Speaking at the 24th annual meeting of the National Athletic Trainers Association, Dr. Combs declared: "It is imperative that we get competent, uniform identification and reporting of sports injuries on a national level."

Dr. Combs said that all interested organizations should pool their money and efforts to develop such a survey.

The Purdue team physician suggested that under a nationwide system of injury reporting, five or six epidemiologists scattered over the country might be designated to collect data concerning athletic injuries.

"They could send this information to a central area where a full-time epidemiologist would computerize and competently analyze all the statistics," Dr. Combs said.

IMMATERIA MEDICA

By DUDLEY STRAUS

The Hurry Condition of Potential Good Samaritans

Forty "unwitting" theological students at Princeton University were subjected to an experimental situation, according to a release from the American Psychological Association, and we've been trying to decide what grabs us the most—the experiment, its language, or the investigators' arithmetic.

These 40 ministers-to-be were asked to prepare a short talk either on the parable of the good Samaritan or on vocations. They then were given a campus map with specific directions for reaching a laboratory where the speech was to be taped.

The "subjects were told they were already late for the session (high-hurry condition), were expected momentarily (intermediate-hurry condition), or that they could take their time (low-hurry condition)."

Along their way was the booby trap—a groaning, coughing person slumped in a doorway. Sixteen of the subjects stopped to help the "victim," the report says; of these, "63 per cent were low-hurry subjects; 45 per cent were intermediate-hurry subjects; 10 per cent were high-hurry subjects."

(As we work that out, we get a total of 118 per cent, and we also get 10.08 divinity students in a low hurry, 7.2 in an intermediate hurry, and 1.6 in a high hurry.)

The investigators conclude that "the hurry condition of the subject proved significant to whether he would stop to help the victim." They also observe that "the lowly Samaritan, on the other hand, with little responsibility and time on his hands, could afford to stop and assist the distressed victim."

We have an enormous store of brilliant comments to offer on this study, but our hurry state is peaking, so desperate readers will just have to get along without them.

* * *

We had just learned, from the *St. Louis County Medical Society Bulletin*, of the existence of the American Trauma Society when we received a release from the Veterans Administration reporting a program that "provides veterans 'who are dropouts from the human race' an opportunity to complete college preparatory courses."

We assume they were suffering from the American trauma and hope that the society will get in touch with them about it.

* * *

"What is your diagnosis—psycho-physio-offer cerebral angiography and biplane the Medrad injector and utilizes a film—various tranquilizers and mood elevators? Have you ever tried referring such a patient to Alanon? In Alanon, instead of taking pills and blaming her troubles on her husband, a woman can learn how to cope with life and how to be happy in spite of her husband's alcoholism—whether he quits drinking or not. Alanon groups are composed of the spouses and other relatives and friends of alcoholics."

—*Bulletin* of the Orange County (Calif.) Medical Association.

Thanks for the tip, but the diagnosis is going to take a bit longer than you might have thought.

Readers are invited to contribute items of 100 words or less to this column. Contributions should be mailed to MEDICAL TRIBUNE, *880 Third Avenue, New York, N.Y., 10022.*

Preventing Emergency Calls #1

Toys can be Dangerous

With the Christmas toy shopping season here, both physicians and parents should be aware that toys—no matter how innocent they look—can be dangerous. In fiscal year 1973 nearly 515,000 injuries associated with toys, tricycles, and bicycles were treated in hospital emergency rooms alone. A poorly designed toy—or a toy in the hands of a child too young to handle it—can cause permanent injury or death, warns the U.S. Consumer Product Safety Commission. The commisson has the power to ban toys with mechanical, electrical, or thermal hazards and has banned some 1,500 individual toys (a list of the banned toys is available through any CPSC area office). In addition, the commission recommends that certain common sense rules be followed in selecting toys and that parents instruct their children in the proper usage of their toys.

Certain toys, such as chemistry sets and electrical toys, should be bought only for more mature children. A young child might open a bottle in a chemistry set with his mouth.

Toy pistol caps that exceed a sound level of 158 db. are banned. No one should be fired within a foot of ear.

Darts are no longer sold as toys. However, they are still carried as sporting goods. Both darts and arrows should be played with only under the supervision of an adult.

Dr. Robert J. Izant, Jr., of Cleveland's University Hospitals, has studied bicycle injuries and found that many occur when two children attempt to ride the same bike.

Medical Tribune Photos—Harvey Shaman

Toys with small parts should be avoided for infants and toddlers. And parents should be aware that a toy bought for an older child may fall into the hands of a younger one. Fabrics on toys should be labeled nonflammable, washable, and hygienic.

Physicians:
We will supply free two-color reprints of this poster, suitable for office display. Send your request to DANGEROUS TOYS, c/o Medical Tribune, 880 Third Avenue, New York, N.Y. 10022. Please specify the number of posters you would like and include 25¢ for postage and handling (Tape quarter to a card.)

Name _____

Address _____

I would like _____ copies of the Dangerous Toys poster.